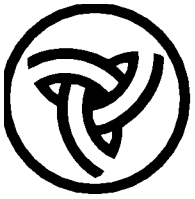
Signing of Road District and Township Highways

October 1997



Illinois Department of Transportation

Bureau of Local Roads and Streets

Signing of Road District and Township Highways

CHAPTER 1 - INTRODUCTION 1

SECTION 1: GENERAL 1
SECTION 2: PURPOSE 1
SECTION 3: PRINCIPLES 2
SECTION 4: PRIORITIES 3
SECTION 5: INSPECTION 3

CHAPTER 2 - SIGN AUTHORIZATION PROCEDURE 4

CHAPTER 3. - GENERAL 6

SECTION 1: SIGN ERECTION AND PLACEMENT 6
SECTION 2: REFLECTORIZATION AND ILLUMINATION 8
SECTION 3: MAINTENANCE 8

CHAPTER 4 - REGULATORY SIGNS 10

SECTION 1: STOP SIGNS (R1-1) 10
SECTION 2: YIELD SIGNS (R1-2) 12
SECTION 3: SPEED LIMIT SIGNS (R2-1), GENERAL 12
SECTION 4: SCHOOL AREA SIGNING (S SERIES) 13
SECTION 5: ROAD CLOSED (R11-2) AND ROAD ENDS (R11-I100) SIGNS 14
SECTION 6: WEIGHT LIMIT SIGNS 14
SECTION 7: PENALTY FOR DUMPING ON PUBLIC HIGHWAYS (R15-I100) 15
FIGURES: FIGURES IV-1 TO IV-10 16

CHAPTER 5 - WARNING SIGNS 26

SECTION 1: CURVE SIGN (W1-2) 27
SECTION 2: LARGE ARROW (W1-6, W1-7) 28
SECTION 3: CHEVRON ALIGNMENT SIGN (W1-8) 28
SECTION 4: CROSS ROAD SIGN (W2-1) 28
SECTION 5: SIDE ROAD SIGN (W2-1) 28
SECTION 6: T SYMBOL SIGN (W2-4) 28
SECTION 7: Y SYMBOL SIGN (W2-5) 28
SECTION 8: STOP AHEAD AND YIELD AHEAD SIGNS (W3-1, W3-2) 28
SECTION 9: ROAD NARROWS SIGN (W5-1) 29
SECTION 10: NARROW BRIDGE SIGN (W5-2) 29
SECTION 11: ONE LANE BRIDGE SIGN (W5-3) 29
SECTION 12: RAILROAD ADVANCE WARNING SIGN (W10-1) 29
SECTION 13: SUPPLEMENTAL RAILROAD CROSSING SIGNING 29
SECTION 14: OTHER WARNING SIGNS 30
FIGURES: FIGURES V-1 TO V-14 31

CHAPTER 6 - MISCELLANEOUS 45

SECTION 1: GUIDE SIGNS 45
SECTION 2: TOURIST ORIENTED DESTINATION SIGNING (TODS) 45
SECTION 3: OBJECT MARKERS 46
FIGURES: FIGURES VI-1 TO VI-3 47

CHAPTER 1 - INTRODUCTION

SECTION 1: GENERAL

Highway signing is important because it helps ensure traffic safety by providing for orderly and predictable movement of traffic on all street and highway systems.

This publication is to furnish guidance to the Highway Commissioner regarding signs and their uses and traffic control devices. Any reference to the "Manual" is to the "Manual on Uniform Traffic Control Devices" or the "Illinois Supplement to the National Manual on Uniform Traffic Control Devices".

This publication should not be used as a substitute for engineering judgment. It is intended that the provisions of this publication be guidelines and not the final authority on the signing of township highways. Conformance with the latest editions of the "Manual on Uniform Traffic Control Devices" and the Illinois supplement to the Manual is required by Section 11-304 of the Illinois Vehicle Code (625 ILCS 5/11-304). This statute states:

> "Local authorities and road district highway commissioners in their respective maintenance jurisdiction shall place and maintain such traffic control devices upon highways under their maintenance jurisdiction as are required to indicate and carry out the provisions of this Chapter, and local traffic ordinances or to regulate, warn, or guide traffic. All such traffic control devices shall conform to the State Manual and Specifications and shall be justified by traffic warrants stated in the Manual. Placement of traffic control devices on township or road district roads also shall be subject to the written approval of the county engineer or superintendent of highways."

SECTION 2: PURPOSE

The purpose of highway signing on township roads is to help insure safety by providing for the orderly and predictable movement of all traffic, both motorized and non-motorized throughout the local system and to provide such guidance and warnings as are needed to insure the safe and informed operation of all users of the system.

Highway signing should be used where warranted by facts and field studies. Signs are essential to regulate and guide traffic over established routes and give information concerning direction and destinations. They warn of hazards that are not evident and call attention to special regulations and restrictions. To be effective, a highway sign should meet five basic requirements:

1. Fulfill a need
2. Command attention
3. Convey a clear, simple meaning
4. Command respect of the road users
5. Give adequate time for proper response

Failure to install and maintain proper signing on township highways has resulted in a number of liability suits. These suits have involved county and township employees who are responsible for highways and highway signing.

The primary purpose of this publication is to assist highway commissioners in providing highway signing and guidance for persons driving on their roads. The recommended practices in this publication are based on average conditions

SECTION 3: PRINCIPLES

More effective use of highway signing requires an understanding of some principles relating to good operating practices. Included in the basic principles are driver expectancy, positive guidance and consistency.

Driver Expectancy

Drivers and people in general, expect things to operate in certain ways. When entering a dark room, a person will expect to find an on-off toggle switch for the lights. One also expects the switch will operate up for "on" and down for "off". When it works the other way around, or when there is a rheostat knob, it takes a bit longer to respond to what is actually there. The same situation occurs with drivers. When a driver's expectancy is incorrect, either it takes longer to respond properly, or even worse, the driver may respond poorly or incorrectly.

If, for example, a curve sign shows a curve to the right but the road actually curves left, one can imagine the difficulty the driver has in properly negotiating the curve, especially a stranger to the area at night. This may seem to be an extreme example; however, this has been observed rather frequently in the "Winding Road" sign in which the bottom or beginning curve points in the wrong direction.

Driver expectancies are affected by the type of function of road, such as an interstate highway, state highway, county road, or township road. The driver expects to drive each of these with different levels of caution.

What the driver expects on a road is greatly influenced by what he experienced on the previous section of road. The presence or absence of traffic control devices, road surface type, condition and width, or narrow bridges and culverts is what the driver expects for the next one-half to one mile (0.8 to 1.6 kilometers).

Driver expectancy is affected not only by the very recent experience, but also by those things drivers have learned through past experience. For example, advance railroad crossing signs are located at railroad grade crossings, stop signs are red, and curve warning signs are yellow and diamond shaped. The consistent use and placement of traffic control devices can do a great deal toward assuring that the driver expectancy is correct.

Positive Guidance

Positive guidance is the concept that a driver can be given sufficient information where and when needed and in a form which can be best used to avoid unsafe conditions. Positive guidance can be given the driver through combinations of signs, hazard markers, safe speed advisory signs, and probably most important of all, the view of the road ahead. If drivers could see curves far enough ahead, approaching cars on crossroads, and intersections hidden by the crest of a hill, there would be little need for anything more than an occasional stop or yield sign on low volume roads.

Consistency

Consistency relates to the "sameness" of the nature of the road from one section to another. Inconsistencies are sudden changes in the nature of the road. They violate a driver's expectancy, thus either the road should be made consistent, which is usually impractical, or something should be done to

change the driver's expectancy. For example, in the case of a hidden curve in a nearly straight roadway, the use of a curve warning sign, with perhaps an advisory speed plate will correctly change the driver's expectancy. After seeing the curve sign, the driver expects the curve, knows whether the road curves left or right, and knows the speed at which the curve can be safely driven.

SECTION 4: PRIORITIES

Following the principles in this guide should provide a safe road system for reasonably prudent drivers. Economics frequently limit the ability to place all signs which may be needed. For this reason, it is important that roadway needs are inventoried, identified and prioritized so that those needs can be fulfilled.

The following is a list of items you may want to include with your considerations when establishing priorities.

1. Accidents
   a) The number of accidents in a given area
   b) Severity of these accidents
   c) Cause of these accidents
2. The volume of traffic in a given area
3. Areas with safety hazards
4. Driver and pedestrian safety
5. Availability of finances
6. Availability of manpower, equipment, and materials

Priorities should be followed but may be changed as the situation dictates.

SECTION 5: INSPECTION

A formal inspection program should be initiated These inspections should be conducted at least annually, but semi-annual inspections are strongly recommended. Records should be kept of all signs, inspections, and sign maintenance activities. Accident records should also be kept to help identify possible deficiencies within the road system.

The following areas have been found to often result in court cases for local agencies:

1. Missing, damaged, obstructed, or hidden Stop signs
2. Stop signs improperly placed at a wrong height, location angle, or not of proper quality (nonreflectorized).
3. Absence of "Stop Ahead" signs where necessary
4. Shrubbery or other obstructions restricting view of signs or road conditions
5. Failure to warn of "T" intersections
6. Lack of an inspection program to determine various road defects and signing problems

Situations listed above should be identified and corrected as soon as possible.

CHAPTER 2 - SIGN AUTHORIZATION PROCEDURE

Placement of traffic control devices and signs authorized by the "Illinois Highway Code" or by the "Illinois Vehicle Code" on township or road district highways shall be subject to the written approval of the county engineer or superintendent of highways. A placement program should be prepared in cooperation with the engineer/superintendent.

In order to establish a signing program, the following is required:

1. Designate through highways.
2. Determine where stop and/or yield intersections are warranted and the quantity of each sign needed.
3. Determine location and type of other regulatory, warning and guide signs and the quantity needed.
4. Secure approval of county engineer or county superintendent of highways. (See Exhibit II-1 for example letter.)
5. Acquire materials.
6. Erect signs in accordance with the current Manual on Uniform Traffic Control Devices.

Following are a few general notes regarding some sign types and their applications. Chapters 4, 5 and 6 provide more detailed guidelines and information about commonly used signs.

A speed limit on road district roads which differs from statutory maximum limits can be established only by the county board of the county in which the road district is situated. The county board can establish an altered limit by ordinance. Guidelines for alterations of speed limits by local authorities is governed by section 11-604 of the Illinois Vehicle Code (625 ILCS 5/11-604).

The law specifically sets the speed limit through school zones at 20 miles per hour "during school days when children are present". This limit is not applicable unless the appropriate signs are posted.

Similarly, any restriction of weight on highways or structures under township jurisdiction is not effective unless and until the necessary signs are erected and maintained. Before erecting any weight limit signs, written approval must be obtained from the County Engineer or County Superintendent of Highways.

The use of warning and guide signs, with the exception of railroad advance warning signs as indicated in Chapter 5, is discretionary with the road district commissioner, as there are no specific warrants which require signing. Signs of this type, therefore, should be placed at locations believed to be potentially unsafe. Once erected, however, it is essential that the warning sign be maintained as long as the potentially unsafe condition exists.

Mr. Hank Hill
County Engineer
Austin, IL

Dear Sir:

In accordance with Section 6-201.16 (605 ILCS 5/6-201.16) of the Illinois Highway Code, I request formal approval to place, erect and maintain traffic control devices and signs authorized by the 'Illinois Highway Code" and the "Illinois Vehicle Code" on township or road district roads under my jurisdiction, at the following locations:

Type of Device	Location
Stop signs	Tropicana Rd. at Frontier Rd.
Stop signs (4 way)	Dunes Rd. at Sands Dr.
Yield signs	Thunderbird Rd. at Las Vegas Rd.
School speed limit signs	Sahara Dr. at Oasis School

It is understood that the traffic control devices and signs will conform to the requirements of the current "Manual on Uniform Traffic Control Devices for Streets and Highways" and the "Illinois Supplement to the National Manual on Uniform Traffic Control Devices, and that said devices shall be maintained in accordance with the Manual.

Very truly yours,

_____
Highway Commissioner

APPROVED

This _____ day of _____, _____

_____
County Engineer/Superintendent of Highways

Exhibit II-1

CHAPTER 3. - GENERAL

The use of signs on road district roads is to give directions, to inform motorists of hazards that are not readily apparent, and to call attention to regulations, restrictions and other conditions.

Signs are classified according to use as follows:

1. **REGULATORY SIGNS** give the driver notice of traffic laws or regulations that apply at a given place or on a given highway. To disregard these signs is punishable as an infraction, violation or misdemeanor.
2. **WARNING SIGNS** call attention to conditions on or adjacent to a highway or a street that is potentially unsafe to traffic operations.
3. **GUIDE SIGNS** show route designation, destinations, directions, distances, points of interest and other geographical or cultural information including street names and parking areas

SECTION 1: SIGN ERECTION AND PLACEMENT

When erecting signs it is essential that the location be determined which will provide maximum visibility. Positions can not be standardized as signs must in all cases be placed in the most advantageous positions depending upon highway design and alignment.

The following are some general rules for locating signs:

1. Locate signs on the right-hand side of the roadway where the driver is in a habit of looking for them.
2. Locate signs to optimize nighttime visibility and minimize the effects of mud spatter.
3. Locate signs so they do not obscure each other or are hidden from view by other roadside objects.
4. Locate decision making signs far enough apart to allow sufficient time to make the decision.

Signs are to be erected individually on separate posts or mountings, except where one sign supplements another, or where signs must be grouped.

Care should be taken not to install too many signs. Regulatory and warning signs should be used conservatively since these signs, in excess, tend to lose their effectiveness. However, the frequent use of route markers and directional signs, to keep drivers aware of their location, will not lessen their value.

Height

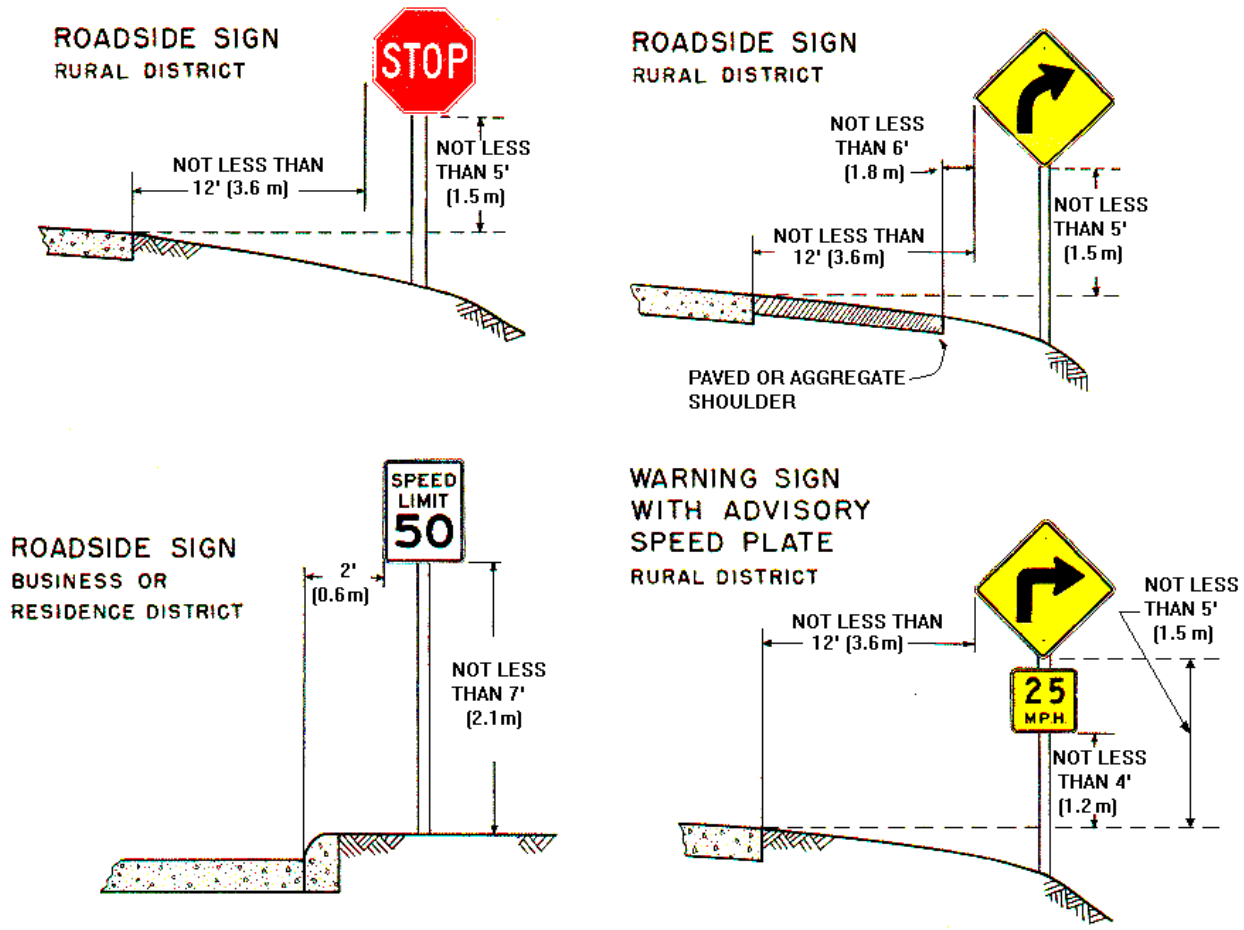
Signs erected in rural areas should be mounted at a height of at least 5 feet (1.5 meters) above the level of the pavement or roadway edge, measured to the bottom of the sign. In areas where there is parking, pedestrian traffic or obstructions to view, the mounting height should be at least 7 feet (2.1 meters). The height to the bottom of a secondary sign may be 1 foot (300 mm) less that the heights specified above.

Lateral Clearance

Signs should have the maximum practical lateral clearance from the edge of the traveled way to provide safety of motorists who may leave the roadway and strike the sign support. Advantage should be taken of existing conditions to minimize the exposure of sign supports to traffic. Otherwise, breakaway or yielding supports should be used.

If the erection of a sign at the desirable distance shown in the figures in the following chapters places the sign beyond the right of way, or on the back side of a ditch hidden by trees of brush, change the location so the sign can be seen by approaching traffic without causing a safety hazard.

Normally, signs would not be closer than 6 feet (1.8 meters) from the edge of the shoulder, or if there is no shoulder, 12 feet (3.6 meters) from the edge of the traveled way. In urban areas, a lesser clearance may be used where necessary. Although 2 feet (600 mm) is the recommended minimum, in areas where sidewalk width is limited or where existing poles are close to the curb, a clearance of 1 foot (300 mm) is allowable.



Erection Details

Signs should face slightly away from oncoming traffic at an angle of 2 to 5 degrees greater than at right angles to the direction of and facing the traffic they are intended to serve, to avoid mirror reflection from the sign faces. On curves, the angle of placement should be determined by the course of approaching traffic rather than by the roadway edge at the point of the sign location.

Posting and Mounting

Sign posts and their foundations and sign mountings shall be constructed to hold signs in a correct and permanent position, and to resist swaying in the wind or removal by vandalism. A single post may be used for the erection of up to 24 inch (600 mm) diamond shaped signs, signs with a horizontal dimension of 30 inches (750 mm) or less, and individual signs with areas of 6.25 square feet (0.58 square meters) or less. A double post installation should be used for signs which are larger than the dimensions previously discussed. In areas where ground mounted sign supports cannot be sufficiently offset from the pavement edge, sign supports should be of a suitable breakaway or yielding design. Concrete bases for sign supports should be flush with the ground level.

SECTION 2: REFLECTORIZATION AND ILLUMINATION

Regulatory and warning signs shall be reflectorized or illuminated to show the same shape and color both by day and night. School signs are not normally illuminated unless there is pedestrian activity to and from the school during non daylight hours.

Reflectorization may be by means of:

1. Reflector "buttons" or similar units set into the symbol or message and border; or
2. Reflective sheeting, either on the sign background or where a white legend is used on a black or colored background, in the symbol or message and border, or both.

Reflector buttons in a highway sign are individual reflecting units arranged in rows or patterns to form letters, symbols, or borders. They are made of glass or transparent plastic with lenses or prisms.

A reflective sheeting is applied either to the background or the legend of a sign, or to both, to give a bright reflection over the area covered.

Sign reflective materials shall reflect white light, or if used as the background of a colored sign, it shall reflect the color of the background.

If a sign is to be illuminated, the illumination may be by means of:

1. A light behind the sign face, illuminating the main message or symbol, or the sign background, or both, through a translucent material; or
2. An attached or independently mounted light source designed to direct essential uniform illumination over the entire face of the sign; or
3. Some other effective device, such as luminous tubing or fiber optics shaped to the lettering or symbol, patterns of incandescent light bulbs, or luminescent panels that will make the sign clearly visible at night.

SECTION 3: MAINTENANCE

All traffic signs should be kept in proper position, clean, and legible at all times. Damaged signs should be replaced without delay.

Poorly maintained signs lose their effectiveness in functioning as traffic control devices. Signs which are damaged, defaced, dirty or missing are ineffective and tend to discredit the agency responsible for the signs.

To assure adequate maintenance, a suitable schedule of inspection should be established. Semi-annual inspections have generally been sufficient. However, the more frequently inspections are done, even on a weekly or monthly basis, the less likely that deficient signing conditions will exist and the potential for legal action to be taken against an agency due to substandard signing and resultant accidents or injuries will be reduced.

Inspections may also be conducted on a daily basis as employees of the local agency drive the township road system. Signs which have been damaged or obscured should be replaced at the first opportunity.

Nighttime inspections should also be conducted to determine whether all signs are functioning properly at night.

Special care should be taken to see that weeds, shrubbery, construction materials, or snow do not obstruct the face of any sign. If these conditions are found to be present, the obstruction should be cleared as soon as possible.

CHAPTER 4 - REGULATORY SIGNS

In most road districts, regulatory signs will be the most widely used of all the classified signs.

Regulatory signs inform highway users of traffic laws or other regulations and indicate the applicability of legal requirements that would not otherwise be apparent. These signs are to be erected at those locations where the regulations apply and should be mounted in a manner in which they can easily be seen and legible to the motorist whose actions they are to govern.

Standard dimensions for all signs have been determined and are specified in the Manual. Sign sizes listed in this booklet are minimum sizes for low volume roads and streets on which 85% of traffic travels at speeds of 35 mph (60 kph) or less. Larger signs should be used as need dictates. Table A on page 4 of the Illinois Supplement to the Manual shows which sizes should be used for various road class versus 85th percentile speed cases. These sizes are listed beginning on page 25 of the Illinois supplement to the Manual. All regulatory signs should be reflectorized or illuminated, consistent with current reflectivity standards, except for school signs which should be reflectorized or illuminated only if there is significant pedestrian flow to and from the school after daylight hours.

SECTION 1: STOP SIGNS (R1-1)

Section 11-302 of the Illinois Vehicle Code (625 ILCS 5/11-302) grants authority to "local authority and road district highway commissioners" to designate any street or highway under their jurisdiction as a through highway, and to require all vehicles to stop or yield before entering or crossing such a through highway.

The STOP sign (Figure IV-1) is octagonal in shape, has a red background, and carries the word "STOP" in white letters. No secondary messages are allowed on Stop sign faces.

On roads and streets without posted speed limits, a class B size sign, 30" x 30" (750 mm x 750 mm) should normally be used. In special cases such as low ADT and posted speeds of 35 mph (60 kph) and below, a class A size sign, 24" x 24" (600 mm x 600 mm) may be used.

Stop signs should not be used for speed control. Portable Stop signs are to only be used in emergency situations, never at school crossings or for other part-time usage.

Any of the following conditions may warrant Stop signs on road district highways:

1. Intersection of a less important road with a main road where application of the normal right-of-way rule is unduly hazardous.
2. Street entering a through highway or street
3. Unsignalized intersection in a signalized area
4. Other intersections where a combination of high speed, restricted view, and serious accident record indicates a need for control by the Stop sign

Prior to the application of these warrants, consideration should be given to less restrictive measures, such as the YIELD sign (pages 12, 18) where a full stop is not necessary at all times. Existing STOP sign locations should be reviewed periodically to determine whether, due to changed conditions, a less restrictive control could accommodate the traffic demands safely and more effectively.

Stop signs should always be erected at the point where the vehicle is to stop or as near as possible, and may be supplemented with a Stop line or the word STOP on the pavement. At minor crossroad or "T" intersections, the stop sign should be set back from the through highway a minimum distance of 12 feet (3.6 meters).

At two-way stop intersections where accident records indicated a large number of accidents involving drivers stopping at the Stop sign and pulling into the path of cross traffic, the "CROSS TRAFFIC DOES NOT STOP" sign (R1-I100) may be used. The use of this sign should be restricted to locations where an engineering study indicates a need for this supplementary sign.

The Multiway Stop installation is ordinarily used where the volume of traffic on the intersecting roads is nearly equal. At a multiway Stop intersection, each Stop sign should be supplemented by a R1-3 or R1-4 plate (ALL WAY, 4-WAY, or 3-WAY) mounted below it indicating the number of approaches. This plate shall be used only when all legs of the intersection are controlled by a Stop sign.

Any of the following conditions may warrant multiway Stop sign installations:

1. As an interim installation which can be made quickly to control traffic where signals are to be installed in the near future
2. At an intersection where an accident problem exists, as indicated by five or more reportable accidents in a 12-month period of a type that is susceptible to correction by the use of the All-Way Stop
3. Minimum traffic volumes:
    a) The total vehicular volume entering the intersection from all approaches must average at least 500 vehicles per hour for any 8 hours of an average day
    b) The combined vehicular and pedestrian volume from the minor street or highway must average at least 200 units per hour for the same 8 hours, with an average delay to minor street vehicular traffic of at least 30 seconds per vehicle during the maximum hour, but
    c) When the 85th percentile approach speed of the major street traffic exceeds 40 mph (65 kph), the minimum vehicular volume warrant is 70 percent of the above requirements

The CROSS TRAFFIC DOES NOT STOP and the ALL-WAY, 4-WAY or 3-WAY plates are the only signs that may be mounted below the Stop sign. No other signs shall be used.

The STOP AHEAD sign (W3-1), shown in Figure IV-2 should be used in advance of any Stop sign that is not visible for sufficient distance to permit the driver to bring his vehicle to a stop. Obstruction of view due to horizontal or vertical curves, parked vehicles, or foliage, and high approach speeds, shall be considered in determining the need for the erection of this sign. The STOP AHEAD sign shall be a minimum of 30 x 30 inches (750 mm x 750 mm).

STOP AHEAD signs on township roads which intersect with a State highway shall be maintained by the township.

In the event the township insists that the Department maintain the signs, an agreement must be entered into with the appropriate district office. The agreement will allow the Department to maintain the signs but requires the township to perform all inspections and notify the department when maintenance is required. When this agreement takes effect, the Department will no longer patrol the township roads for the purpose of inspecting the signs.

SECTION 2: YIELD SIGNS (R1-2)

The YIELD sign, shown in Figure IV-3, assigns right-of-way to traffic on certain approaches to an intersection. Vehicles controlled by a YIELD sign need stop only when necessary to avoid interference with other traffic that is given the right-of-way.

The YIELD sign shall be an equilateral triangle with one point downward, having a red border and white interior with the word "Yield" in red inside the border. The standard size for YIELD signs is 36 inches (900 mm) per side, however, for two lane, low speed minor roads, the acceptable size is 30 inches (750 mm) per side.

The YIELD sign may be erected at an entrance to an intersection when an engineering and traffic investigation warrants that preference be given to traffic on a through street or highway designated in accordance with Section 11-302 of the Illinois Vehicle Code (625 ILCS 5/11-302).

The YIELD sign shall not be used as a substitute for a STOP sign where a STOP sign is warranted. YIELD signs shall not be used:

1. Where visibility limitations or prevailing high speeds or volumes of traffic make a full stop necessary for safety
2. Against the major flow of traffic at an intersection. However, a YIELD sign may be installed to control a major traffic movement where the majority of drivers in that movement are making right turns.
3. On the approaches of more than one of the intersecting streets or highways
4. Where there are stop signs on one or more approaches of an intersection
5. On through highways

A YIELD sign is warranted:

1. At the entrance to an intersection where it is necessary to assign right-of-way and where the safe approach speed on the entrance exceeds 10 mph (15 kph).
2. At any intersection where a problem exists and where an engineering study indicates the problem to be susceptible to correction by use of the YIELD sign

At intersections, the YIELD sign should be set back from the through highway a minimum distance of 12 feet (3.6 meters). If the visibility of a YIELD sign at any location is restricted, the sign shall be erected as specified and a YIELD AHEAD sign (W3-2), shown in Figure IV-2, shall be erected in advance of the YIELD sign.

Where two roads intersect at an acute angle, the YIELD sign shall be positioned at an angle or shielded if necessary so that the message can not be seen by the traffic to which it does not apply.

SECTION 3: SPEED LIMIT SIGNS (R2-1), GENERAL

Speed limit signs (Figure IV-4) are intended to inform motorists of the maximum statutory speed limit established in Section 11-601 of the Illinois Vehicle Code (625 ILCS 5/11-601), or a speed limit altered on the basis of an appropriate engineering and traffic investigation, in accordance with Section 11-604 (625 ILCS 5/11-604).

No change in the basic statutory speeds on road district roads shall become effective until the prescribed action has been taken by the county board and appropriate signs are erected. The speed limits shall be posted in multiples of 5 miles per hour. The standard Speed Limit sign is 24 x 30 inches (600 mm x 750 mm), however, for minor two-lane roads with low ADT, a size of 18 x 24 inches (450 mm x 600 mm) is permissible.

In order to determine the proper speed limit on the basis of an engineering and traffic investigation, the following factors should be considered:

1. Road surface characteristics, shoulder condition, grade, alignment, and sight distance.
2. The 85th percentile speed and pace speed.
3. Roadside development and culture, and roadside friction.
4. Safe speed for curves or hazardous locations within the zone.
5. Parking practices and pedestrian activity.
6. Reported accident experience for a recent 12-month period.

Speed Limit signs, shall be located at the points of change from one speed limit to another. These signs shall not be erected until the speed limits are approved and officially authorized.

A SPEED ZONE AHEAD sign (R2-5c) should be used in rural areas to inform motorists of a reduced speed zone when an advance notice is required to comply with the speed limit posted ahead. These signs are not normally used in urban areas due to relative low speeds. This sign shall be of the same size as the Speed Limit sign at the beginning of the speed zone. These signs should be erected at distances in advance of Speed Limit signs as determined in Chapter 5, Table V-1 of this booklet.

SECTION 4: SCHOOL AREA SIGNING (S Series)

The SCHOOL SPEED LIMIT 20 WHEN CHILDREN ARE PRESENT sign assembly is for use in establishing speed zones authorized in Section 11-605 of the Illinois Vehicle Code (625 ILCS 5/11-605). The 20 miles per hour school speed zones are applicable only when the appropriate signs are posted.

The school speed limit sign shall consist of either a single sign (S4-I100) or a combination of separate panels consisting of a SCHOOL panel (S4-3), a standard SPEED LIMIT 20 sign (R2-1)and an ON SCHOOL DAYS WHEN CHILDREN ARE PRESENT panel (S4-2).

School speed zones should be indicated by three signs

1. The advance sign, SCHOOL SPEED ZONE AHEAD with a speed advisory sign, 20 MPH placed beneath (S4-I102) is shown in Figure IV-5. This sign should be erected a minimum of 400 feet (125 meters) ahead of the SCHOOL SPEED LIMIT 20 sign in urban areas and approximately 800 feet (245 meters) ahead in rural areas.
2. The SCHOOL SPEED LIMIT 20 DO NOT PASS (S4-I101), shown in Figure IV-5 is intended for use in unincorporated areas as required by Section 11-707(d) of the Illinois Vehicle Code. The panels may be mounted individually or combined into one 48” x 48” (1.2 m x 1.2 m) sign. Pavement marking shall not be used since the passing restriction is only in effect on school days when children are present.
3. The end of the school speed zone shall be marked by posting the appropriate standard speed limit sign or an END SCHOOL ZONE sign (S5-2).

School speed zones should be limited to those locations where public, private or religious nursery through secondary school buildings or grounds are adjacent to the highway or at established school

crossings where groups of school children cross the highway in route to and from a school not adjacent to the highway. The school speed zone is only applicable on school days where children are present and so close to traffic that a potential hazard exists. School speed zones should not be used at schools where all of the children are either bused or driven to school and do not enter or leave the vehicles in close proximity to the highway.

The SCHOOL ADVANCE SIGN (S1-1) shown in Figure IV-5, is intended for use in advance of locations where school buildings or grounds are adjacent to the highway. It may also be used in advance of established school crossings not adjacent to a school ground. This sign shall be used in advance of any installation of the SCHOOL CROSSING SIGN, and shall be placed 150 - 700 feet (45 - 215 meters) in advance of the school grounds or school crossing.

The SCHOOL CROSSING SIGN (S2-1) shown in Figure IV-5, is intended for use at established crossings including signalized locations used by pupils going to and from school, except that at crossings controlled by Stop signs, the sign should be omitted. Only crossings adjacent to schools and those on established school pedestrian routes shall be signed. When used, the sign shall be erected at the crosswalk, or at the minimum distance possible in advance of the crosswalk.

SECTION 5: ROAD CLOSED (R11-2) AND ROAD ENDS (R11-I100) SIGNS

The temporary ROAD CLOSED sign (Figure IV-6) is to be used to mark roads that have been closed to all traffic (except contractor's equipment and other authorized vehicles) either because of construction or maintenance operations, or because of a temporary emergency such as high water or a landslide.

The sign should be mounted on a reflectorized orange and white Type III Barricade in or near the center of the roadway, at a minimum height of 1 foot (300 mm) above the pavement elevation although higher mounting heights are desirable. The DETOUR ARROW sign, if a detour has been designated, is usually placed just below the ROAD CLOSED sign. Where the sign faces through traffic, an advance ROAD CLOSED warning sign and , if applicable, an advance DETOUR warning sign should be used.

A ROAD ENDS sign should be used on a permanent road closure. It is recommended that the sign be mounted on a Type III Barricade when some significant hazard exists beyond the closure point. The barricade shall be striped red and white and be reflectorized. The sign should be mounted on the barricade as close to the center of the roadway as possible at a minimum distance of 1 foot (300 mm) above the pavement elevation, measured to the bottom of the sign, although higher mounting heights are desirable.

When the road has been removed and a hazard does not exist, a ROAD ENDS sign along with two or more reflectorized Type I Object Markers may be used to permanently close a low volume road. The sign should be mounted on an acceptable post in the center of the roadway with object marker signs on both sides. The distance between the pavement and the bottom of the sign should be a minimum of 1 foot (300 mm) although higher mounting heights are desirable.

An example of a Long Term Bridge Closure and a Low Volume Road Closure may be found in Figures IV-7 and IV-8, respectively. Suggested approach signing is also shown.

SECTION 6: WEIGHT LIMIT SIGNS

The WEIGHT LIMIT ____ TONS sign (R12-1), shown in Figure IV-9, is for use at bridges or roadways when a single weight limit has been authorized. It shall be located immediately in advance of the section of highway, or the structure to which it applies. In case of an extended length of restricted roadway, it

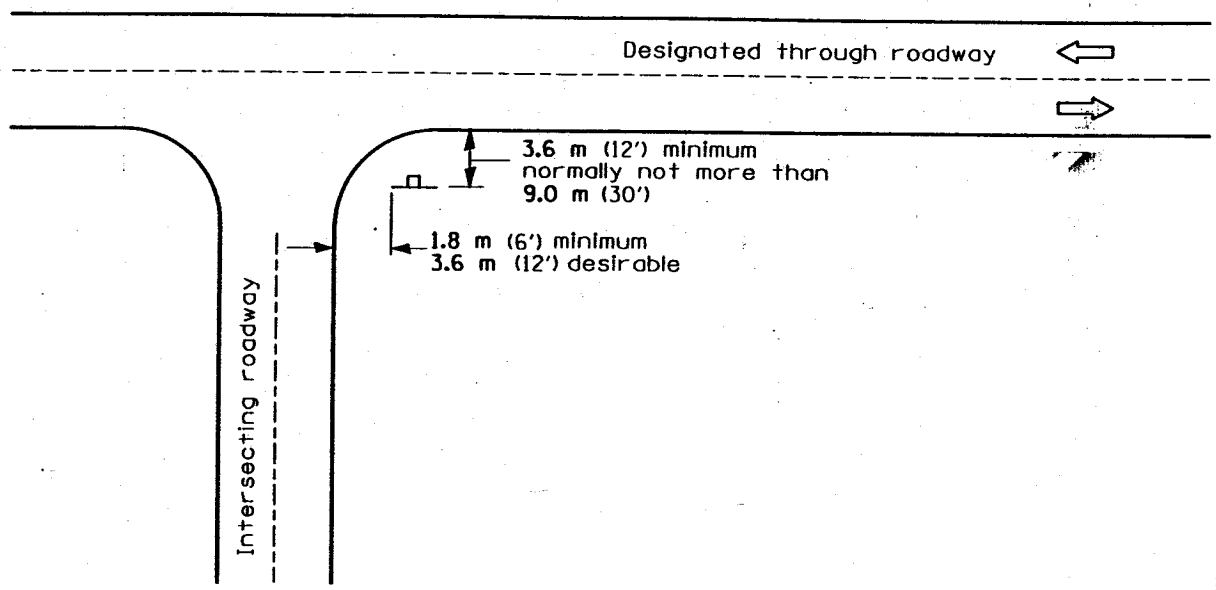
shall be placed on the right hand side approximately 25 feet (7.5 meters) beyond any intersecting road on which the restriction does not apply, so as to be visible from all vehicles turning into the restricted roadway.

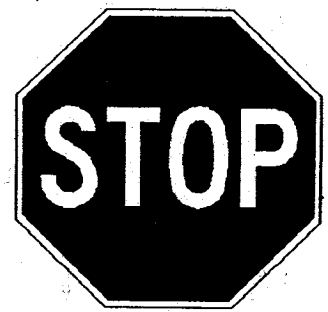
The seasonal WEIGHT LIMIT _____ TONS /_____ to _____ sign (R12-I104), shown in Figure IV-10, is for use on the roadways which are designated as having seasonal weight restrictions provided under Section 15-316 of the Vehicle Code (625 ILCS 5/15-316). The signs are to be erected at each end of the portion of highway affected and at such intermediate locations as deemed necessary to adequately inform the public.

The BRIDGE WEIGHT LIMIT _____ TONS sign (R12-I100, R12-I101), not shown, is to be used where two separate weight restrictions are to be posted. The Department either upon request from a local authority shall, or upon its own initiative may, conduct an investigation of the bridge and determine and declare the maximum weight of vehicles that the bridge can withstand. The Department will then cause or permit suitable signing stating maximum allowable weights to be erected and maintained. These signs shall be mounted within 300 feet (90 meters), but not closer than 50 feet (15 meters) of the bridge.

SECTION 7: PENALTY FOR DUMPING ON PUBLIC HIGHWAYS (R15-I100)

The PENALTY FOR DUMPING ON PUBLIC HIGHWAYS sign, shown in Figure IV-11, is authorized by Section 9-121 of the Highway Code (605 ILCS 5/9-121). It should be erected so as to provide the most efficient display of the message and may be parallel or at right angles to the pavement. This sign should be used only at such locations where dumping is likely to occur.





REGULATORY SIGN
STOP
(R1-1)

FIG. IV-1

SHEET 16

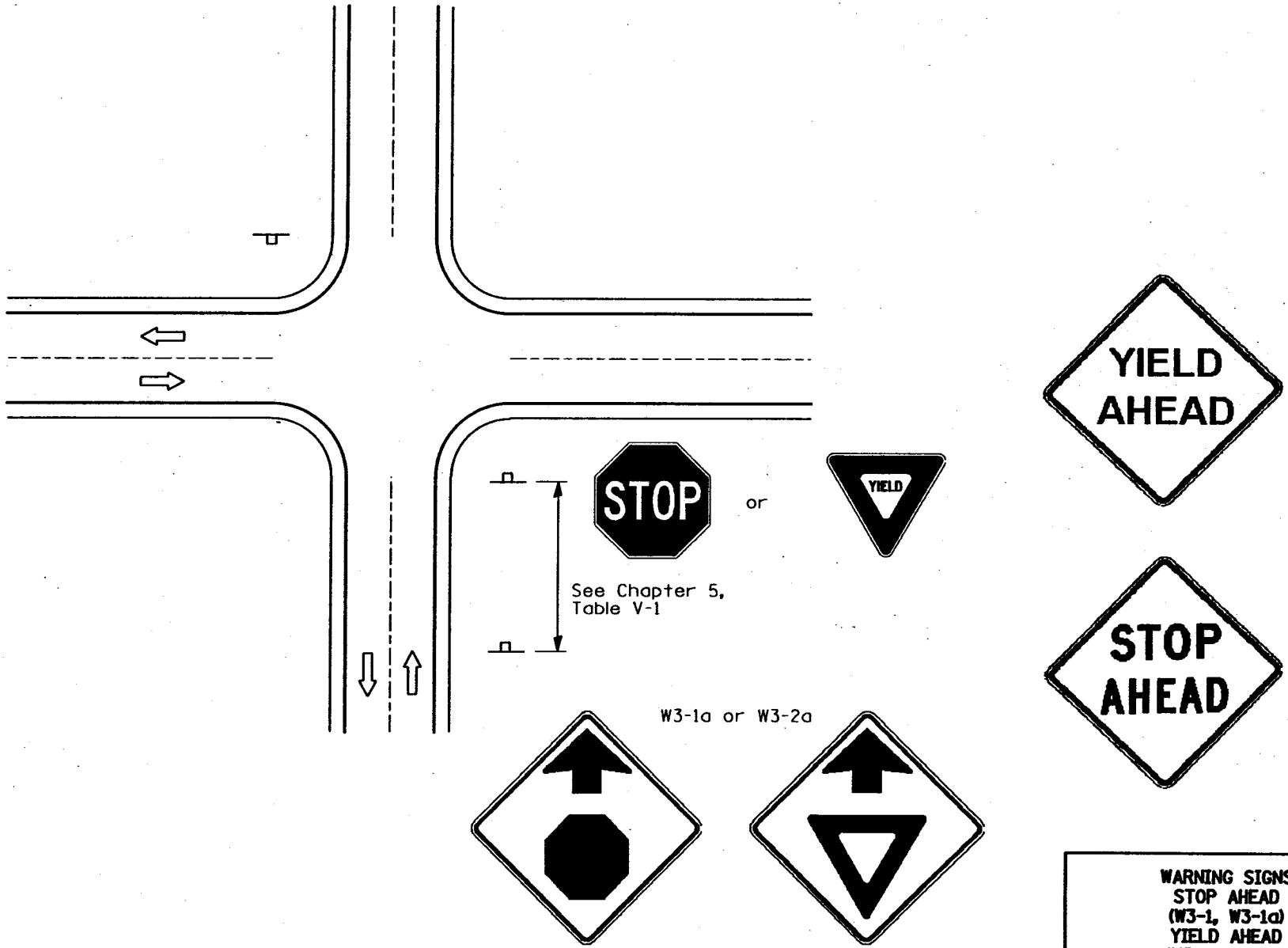
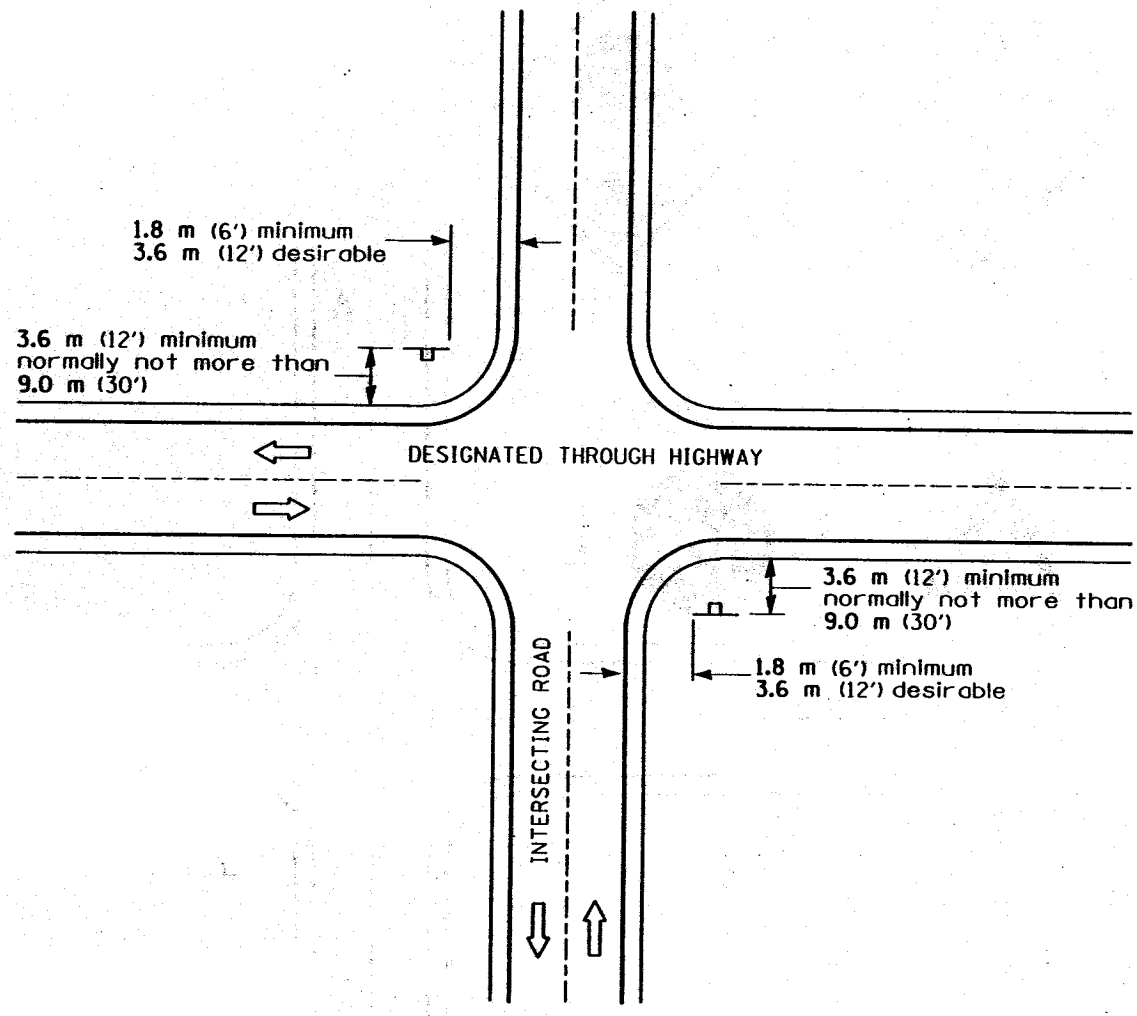
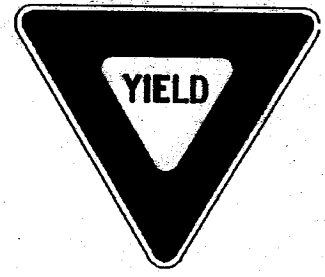


FIG. IV-2

SHEET 17



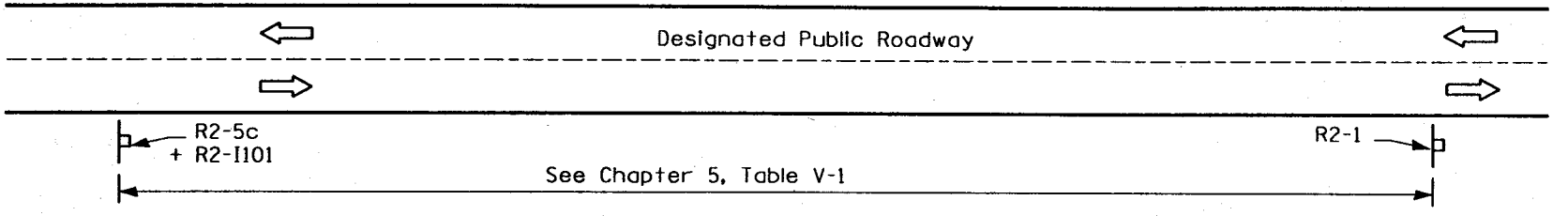


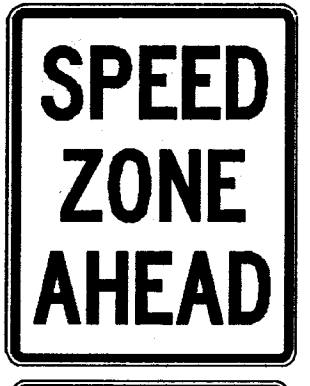
R1-2

REGULATORY SIGN
YIELD
(R1-2)

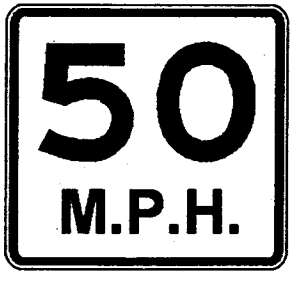
FIG. IV-3

SHEET 18





R2-5c



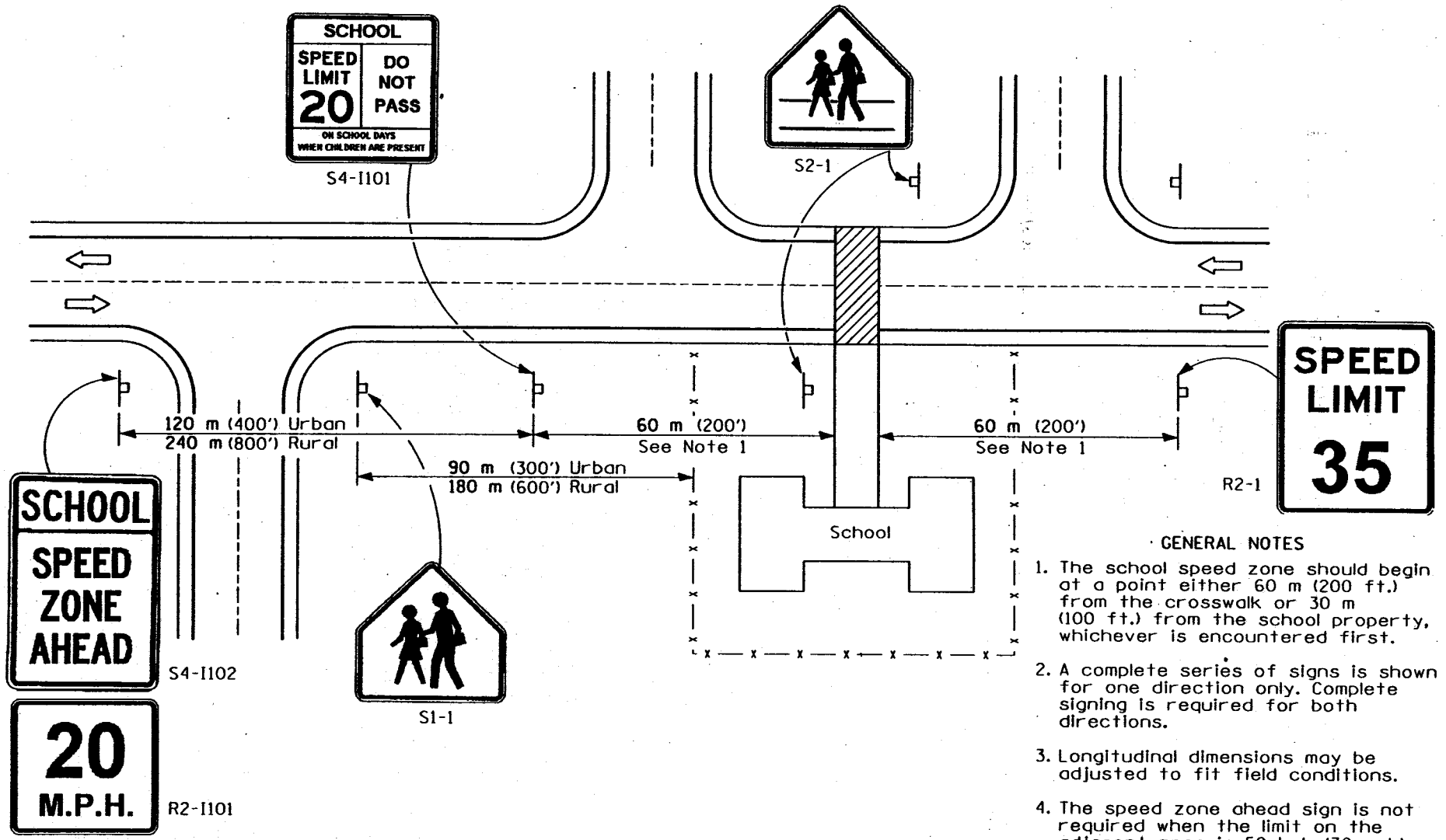
R2-I101

R2-1

REGULATORY SIGN
SPEED LIMIT
(R2-1)
SPEED ZONE AHEAD
(R2-5C)

FIG. IV-4

SHEET 19



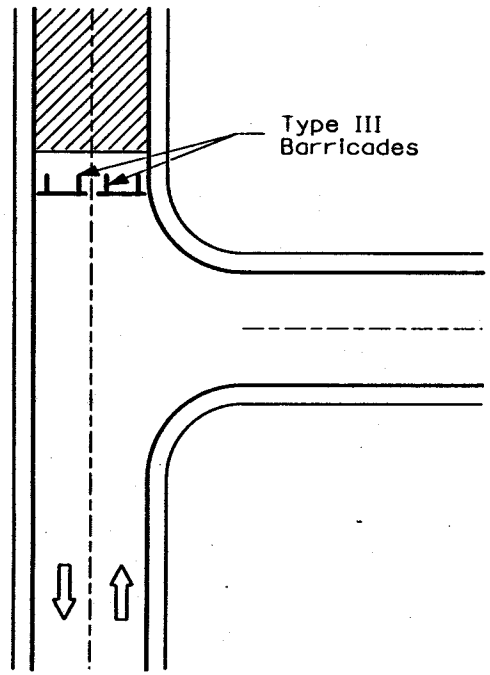
GENERAL NOTES

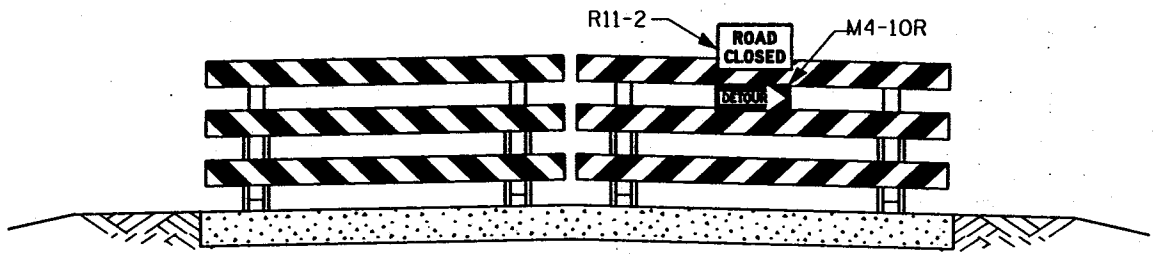
1. The school speed zone should begin at a point either 60 m (200 ft.) from the crosswalk or 30 m (100 ft.) from the school property, whichever is encountered first.
2. A complete series of signs is shown for one direction only. Complete signing is required for both directions.
3. Longitudinal dimensions may be adjusted to fit field conditions.
4. The speed zone ahead sign is not required when the limit on the adjacent zone is 50 kph (30 mph) or less.

TYPICAL SIGNING FOR SCHOOL AREA TRAFFIC CONTROL

FIG. IV-5

SHEET 20





Alternate white and orange reflectorized stripes at 45°. All stripes shall be 150 mm (6 in.) in width.

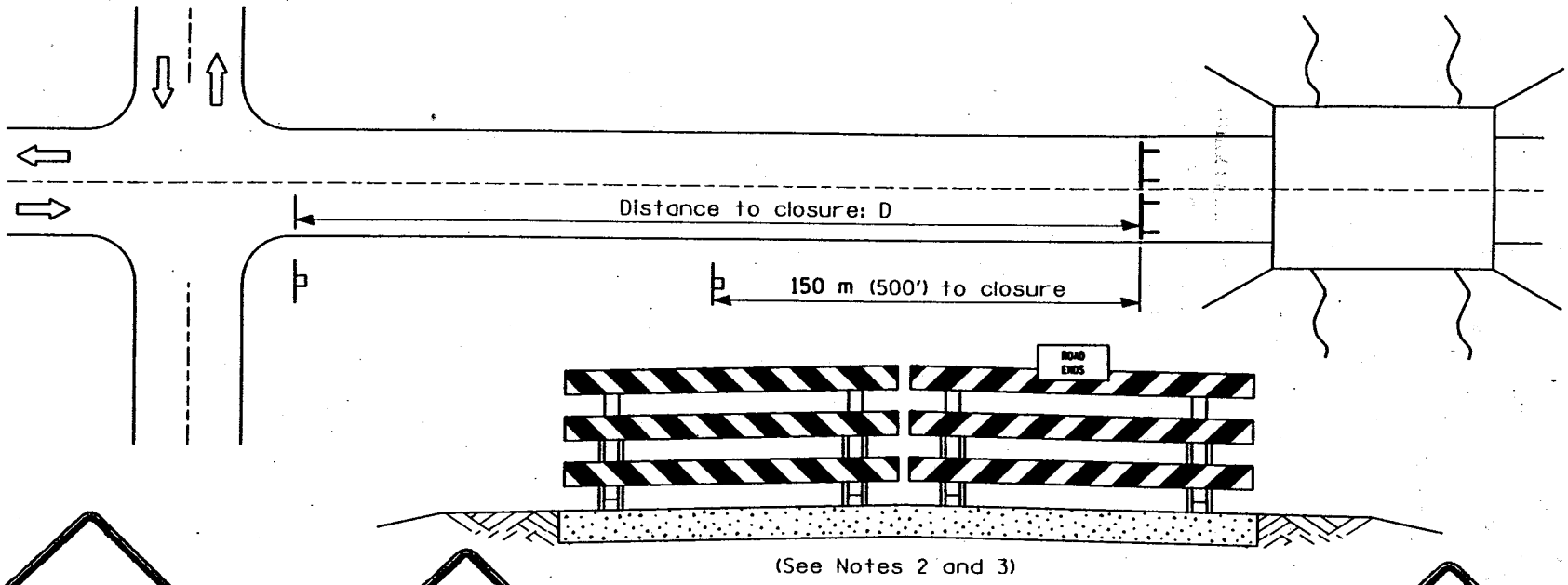
R11-2

M4-10R or
M4-10L

TEMPORARY ROAD CLOSURE
REGULATORY SIGN
ROAD CLOSED (R11-2)
GUIDE SIGN
DETOUR ARROW (M4-10R) (M4-10L)

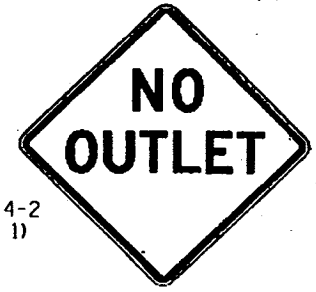
FIG. IV-6

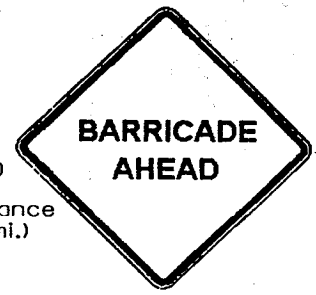
SHEET 21



(See Notes 2 and 3)

W14-1 or W14-2
(See Note 1)





W21-1100

May be omitted when distance is less than 0.4 km (0.25 mi.)

GENERAL NOTES

1. Use 0.6 m (24 in.) size signs for 2-lane, low ADT roads with speeds of 60 km/hr (35 mph) and below; 0.75 m (30 in.) size signs for 2-lane, low ADT roads with speeds of 65 km/hr (40 mph) and above.

2. Where the bridge remains in place and the approach road ends at or within 150 m (500 ft.) of the bridge, a permanent red/white fully reflectorized Type III barricade should be used to completely close the road. If the bridge or the deck has been removed or if a physical barrier (i.e. large pile of dirt, broken concrete or other energy dissipating material) is used to keep vehicles from accessing the bridge, the barricade should be located at least 30 m (100 ft.) in advance of the barrier or stream bank.

3. Where the approach road has been completely removed at least 150 m (500 ft.) in advance of the bridge site, two or more red reflectorized Type I Object Markers mounted at the end of the roadway may be used in place of the barricade. If the bridge has not been removed, a physical barrier should also be used at the bridge to deny access to off-road vehicles (See Figure No. IV-8).

R11-1100

LONG TERM BRIDGE CLOSURE

FIG. IV-7

SHEET 22

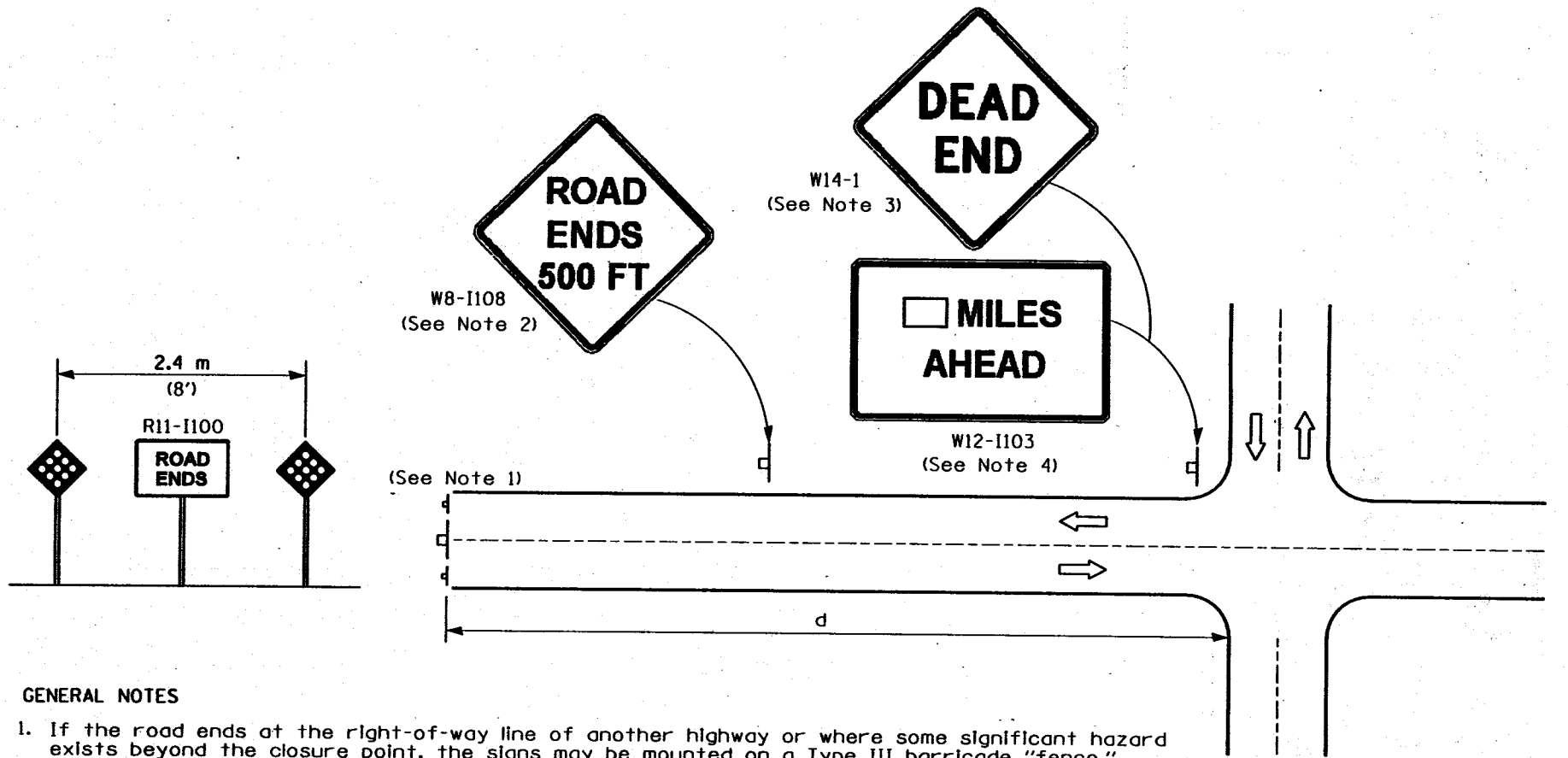


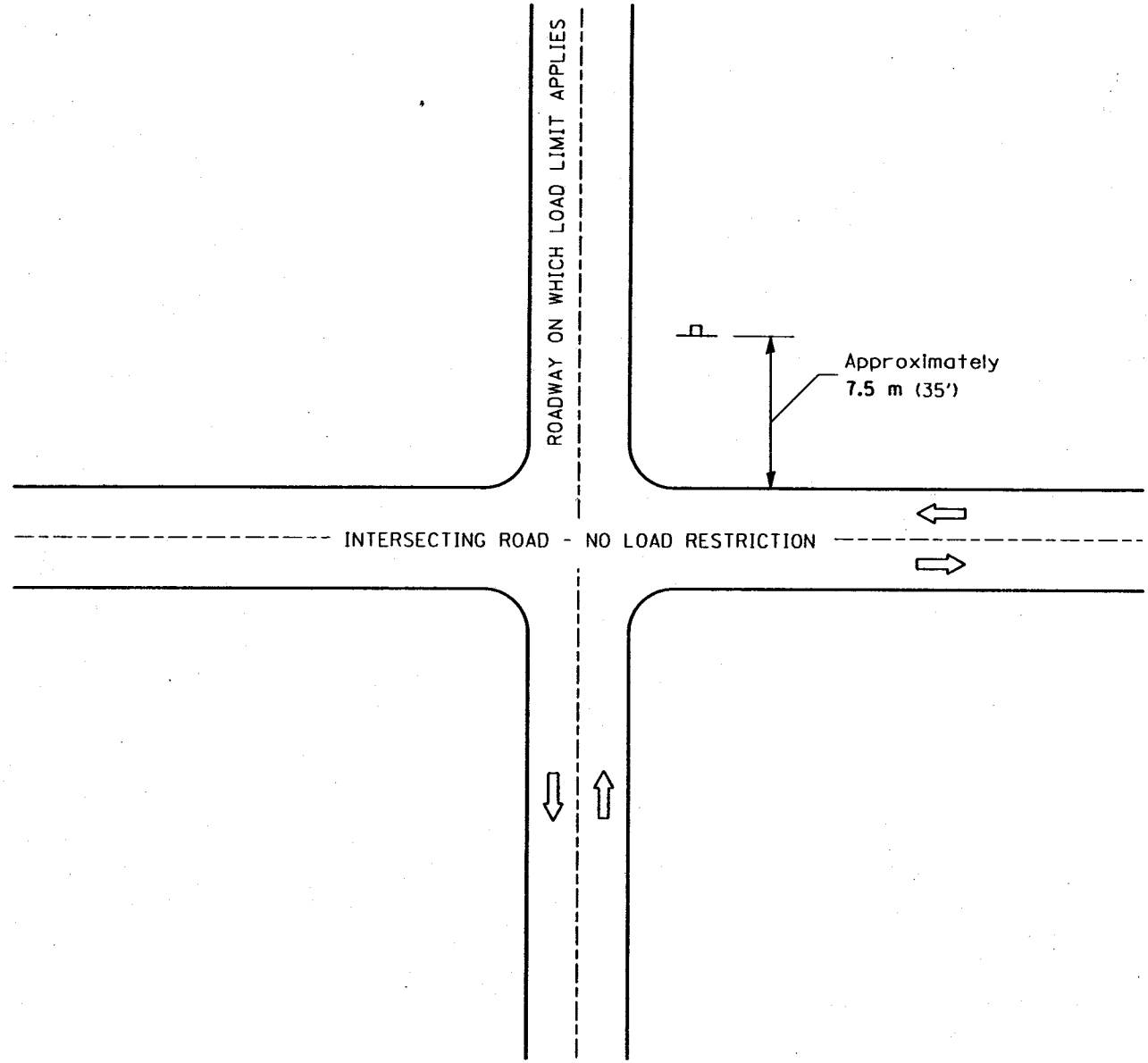
FIG. IV-8

GENERAL NOTES

1. If the road ends at the right-of-way line of another highway or where some significant hazard exists beyond the closure point, the signs may be mounted on a Type III barricade "fence." Guardrail may be used in lieu of or in conjunction with the barricade "fence" where it is necessary to prevent deliberate entry onto access controlled right-of-way or an extreme hazard exists immediately beyond the closure point. Barricades, when used, shall be striped red and white and fully reflectorized. If practical, old pavement should be removed to some distance beyond the closure point or covered with dirt to minimize the illusion of the road continuing and to provide a reasonable safe recovery area. The markers for the end of roadway shall conform with Section 3C-4 of the MUTCD.
2. Use where "d" exceeds 460 m (1500ft.) or where sight distance to the closure is less than 150 m (500 ft.).
3. The DEAD END sign (W14-1) should be used in all cases except where the closure point is visible from the crossroad.
4. Where the point of closure is over 1.6 km (1 mi.) from the last crossroad, a _____ MILES AHEAD plate (W12-I103) may be used.

LOW VOLUME ROAD CLOSURE

SHEET 23



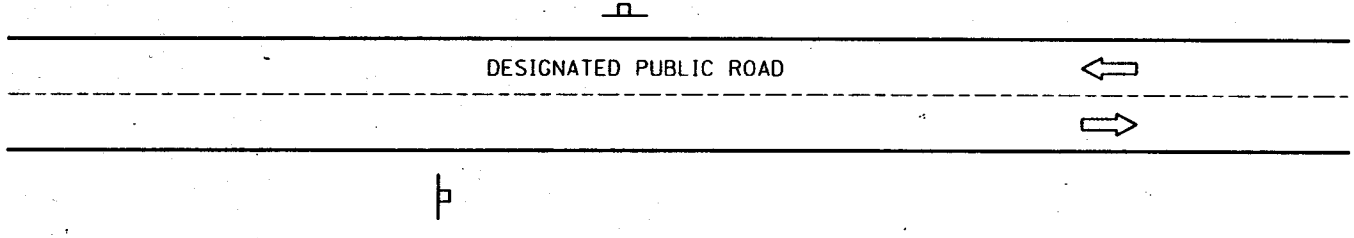
R12-1

R12-I104

REGULATORY SIGN
WEIGHT LIMIT - TONS
(R12-1)
SEASONAL WEIGHT LIMIT
(R12-I104)

FIG. IV-9

SHEET 24



PENALTY FOR DUMPING ON PUBLIC HIGHWAYS

R15-I100

FIG. IV-10

SHEET 25

REGULATORY SIGN PENALTY FOR DUMPING ON PUBLIC HIGHWAYS (R15-I100)

CHAPTER 5 - WARNING SIGNS

Warning signs are to be used to alert traffic of existing or potentially hazardous conditions either on or adjacent to the road (Figure V-1). Warning signs require caution on the part of the motorist and may call for an adjustment of speed or other maneuvers in the interest of their own safety and that of pedestrians and other motorists.

Typical locations and hazards that may warrant the use of warning signs are:

1. Changes in horizontal alignment
2. Intersections
3. Advance warning of control devices
4. Converging traffic lanes
5. Narrow roadways
6. Changes in roadway design
7. Grades
8. Roadway surface conditions
9. Railroad Crossings
10. Entrances and crossings
11. Other miscellaneous situations

The determination of the sign or signs to be erected shall be on the basis of an engineering study.

Since warning signs are primarily for the benefit of the driver who is unacquainted with the road, it is very important that care be given to the placement of these signs. Warning signs should provide adequate time for the driver to perceive, identify, decide and react. This total time to perceive and complete a reaction to a sign is the sum of the times necessary for Perception, Identification/Understanding, Emotion/Decision-making, and Volition/Execution, and is referred to as the PIEV time. The PIEV time can vary from about three seconds for general warning signs to ten seconds for high driver judgment warning signs.

The following Table V-1 lists suggested minimum advance warning sign placement distances that may be used under three conditions:

Condition A - A higher driver judgment condition which requires the driver to use extra time in making and executing a decision because of a complex driving situation; i.e. passing, merging.

Condition B - A condition in which the driver will likely be required to stop, i.e. cross road, stop ahead, signal ahead.

Condition C - A condition in which the driver will likely be required to decelerate to a specific speed, i.e. turn, curve, hill, dip.

Table V-1 ([1]) ([3])

Table V-1 ([1]) ([3])

Posted or 85th Percentile Speed	Condition A (High Judgment)	Condition B (Stop)	Condition C (Deceleration Condition to Listed Advisory Speed)				
MPH(KPH)		0 (0)	10 (15)	20 (30)	30 (50)	40 (60)	50 (80)
20 (30)	175 (55)	([4])	([4])	--	--	--	--
25 (40)	250 (75)	([4])	100 (30)([2])	--	--	--	--
30 (50)	325 (100)	100 (30)	150 (45)	100 (30)	--	--	--
35 (55)	400 (120)	150 (45)	200 (60)	175 (55)	--	--	--
40 (60)	475 (145)	225 (70)	275 (85)	250 (75)	175 (55)	--	--
45 (70)	550 (170)	300 (90)	350 (105)	300 (90)	250 (75)	--	--
50 (80)	625 (190)	375 (115)	425 (130)	400 (120)	325 (100)	225 (70)	--
55 (90)	700 (215)	450 (135)	500 (150)	475 (145)	400 (120)	300 (90)	--
60 (100)	775 (235)	550 (170)	575 (175)	550 (170)	500 (150)	400 (120)	300 (90)

(1) Distances shown are in feet (meters) and for level roadways. Corrections should be made for grades. If 48 inch (1.2 meter) signs are used, the legibility distance may be increased to 200 feet (60 meters). This would allow reducing the above distance by 75 feet (25 meters).

(2) In urban areas, a supplementary plate underneath the warning sign should be used specifying the distance to the condition if there is an in-between intersection which might confuse the motorist.

(3) Distance provides for 3-second PIEV, 125 feet (40 meter) Sign Legibility Distance, Braking Distance for Condition B and Comfortable Braking Distance for Condition C.

(4) No suggested minimum distance provided. At these speeds, sign location depends on physical conditions at site.

Note: This table is provided as an aid for determining warning sign locations. The values contained in the table are for guidance purposes and should be applied with engineering judgment. The metric values contained in the table have been rounded off to the nearest 5 meters.

The use of warning signs should be kept to a minimum because the unnecessary use to warn of conditions which are apparent, tends to breed disrespect for all signs.

Generally, warning signs are diamond-shaped (square with one diagonal vertical) and have a yellow background with black legend and border. All warning signs shall be reflectorized or illuminated. The minimum size for diamond-shape signs, except where otherwise specified, is 24 inches by 24 inches (600 mm x 600 mm). The words CAUTION or SLOW or other similar messages are not to be used on warning signs since their shape and color implies that the motorist should exercise caution and may have to reduce speed.

The following sections describe warning signs commonly used on rural highways.

SECTION 1: CURVE SIGN (W1-2)

The Curve Sign (W1-2R or 2L), 30" by 30" (750 mm x 750 mm), shown in Figure V-2, may be used where engineering investigations of roadway, geometric and operating conditions show the recommended speed on the curve to be greater than 30 mph (50 kph), and equal to or less than the speed limit

limitestablished for that section of highway. An Advisory Speed plate may be used for additional protection. These signs should be placed in accordance with Table V-1.

SECTION 2: LARGE ARROW (W1-6, W1-7)

The Large Arrow sign (Figure V-3), shall be a horizontal rectangle with a standard size of 48" by 24" (1.2 m by 600 mm), having either a large arrow pointing right or left or a double arrow. A Large Arrow sign is intended to give notice of a sharp change of alignment in the direction of travel. This sign shall be erected on the outside of a curve or on the far side of a T intersection, in line with and at right angles to, approaching traffic.

SECTION 3: CHEVRON ALIGNMENT SIGN (W1-8)

The Chevron Alignment sign, shown in Figure V-4, shall be a vertical rectangle with a minimum 12" by 18 " (300 mm x 450 mm) size and shall be a black chevron symbol on a yellow background. The Chevron Alignment sign is intended to provide additional emphasis and guidance to motorists as to sharp changes of horizontal alignment. Chevron Alignment signs, when used, are erected on the outside of a curve, sharp turn, or on the far side of an intersection, in line with and at right angles to approaching traffic. Spacing of the signs should be such that the motorist always have two in view, until the change in alignment eliminates the need for the signs. The signs should be visible for at least 500 feet (150 meters).

SECTION 4: CROSS ROAD SIGN (W2-1)

The Cross Road sign, shown in Figure V-5, is intended for use on a through roadway to indicate the presence of an obscured crossroad intersection. The relative importance of the intersecting roads may be shown by lines of different widths in the diagram. These signs should be placed in accordance with Table V-1.

SECTION 5: SIDE ROAD SIGN (W2-1)

The Side Road sign (Figure V-6), showing a side-road symbol, either left or right, and at either a 45 or 90 degree angle is intended for use in advance of a side-road intersection according to the same warrants as those set forth for the Cross Road sign.

SECTION 6: T SYMBOL SIGN (W2-4)

The T symbol sign, shown in Figure V-7, is intended to warn traffic approaching a T-intersection on the road that forms the stem of the T. The sign should not generally be used on an approach where traffic is required to stop before entering the intersection, or at a T-intersection that is channelized by traffic islands. It may be desirable to place a double-headed Large Arrow at the head of the T directly facing approaching traffic.

SECTION 7: Y SYMBOL SIGN (W2-5)

The Y symbol sign, shown in Figure V-8, is intended to warn traffic approaching a Y-intersection on the road that forms the stem of the Y. The sign should not generally be used at a Y-intersection that is channelized by traffic islands. It may be desirable to erect a double-headed Large Arrow sign at the fork of the Y directly in line with approaching traffic.

SECTION 8: STOP AHEAD AND YIELD AHEAD SIGNS (W3-1, W3-2)

The STOP AHEAD and YIELD AHEAD signs, shown in Figure IV-2, are intended for use on approaches to a STOP or YIELD sign that is not visible for a sufficient distance to permit the driver to bring the vehicle to a stop. The signs shall be a minimum of 30 x 30 inches (750 mm x 750 mm). The word messages STOP AHEAD or YIELD AHEAD may be used as an alternate to the symbol signs.

SECTION 9: ROAD NARROWS SIGN (W5-1)

A ROAD NARROWS sign, shown in Figure V-9, is intended for use in advance of a transition in width of a two lane road to a width such that two cars can not pass safely without reducing their speeds.

SECTION 10: NARROW BRIDGE SIGN (W5-2)

The Narrow Bridge sign, shown in Figure V-10, is to be placed in advance of a bridge or culvert having a clear two-way roadway width of 16 to 18 feet (5.0 to 5.5 meters) or any bridge or culvert having a roadway clearance less than the width of the approach pavement. Additional protection should be provided by the use of object markers (see Chapter 6, Section 2) at the ends of handrails on both sides of the roadway.

SECTION 11: ONE LANE BRIDGE SIGN (W5-3)

A ONE LANE BRIDGE sign, shown in Figure V-11, should be used on two-way roadways in advance of bridges or culverts having a clear roadway width of less than 16 feet (5.0 meters) or when the alignment is poor on the approach to a structure having a clear roadway width of 18 feet (5.5 meters) or less. Object markers (see Chapter 6, Section 2) should also be placed at the ends of handrails on both sides of the roadway.

SECTION 12: RAILROAD ADVANCE WARNING SIGN (W10-1)

The Railroad Advance Warning sign, shown in Figure V-12, shall be used in advance of every railroad crossing, even if protected by crossbucks, signals, or flagmen except:

1. On low-volume, low-speed roadways crossing minor spurs or other tracks that are infrequently used and which are flagged by members of the train crews
2. Where physical conditions do not permit even a partially effective display of the sign.

These signs may be placed a minimum distance of 100 feet (30 meters) from the crossing.

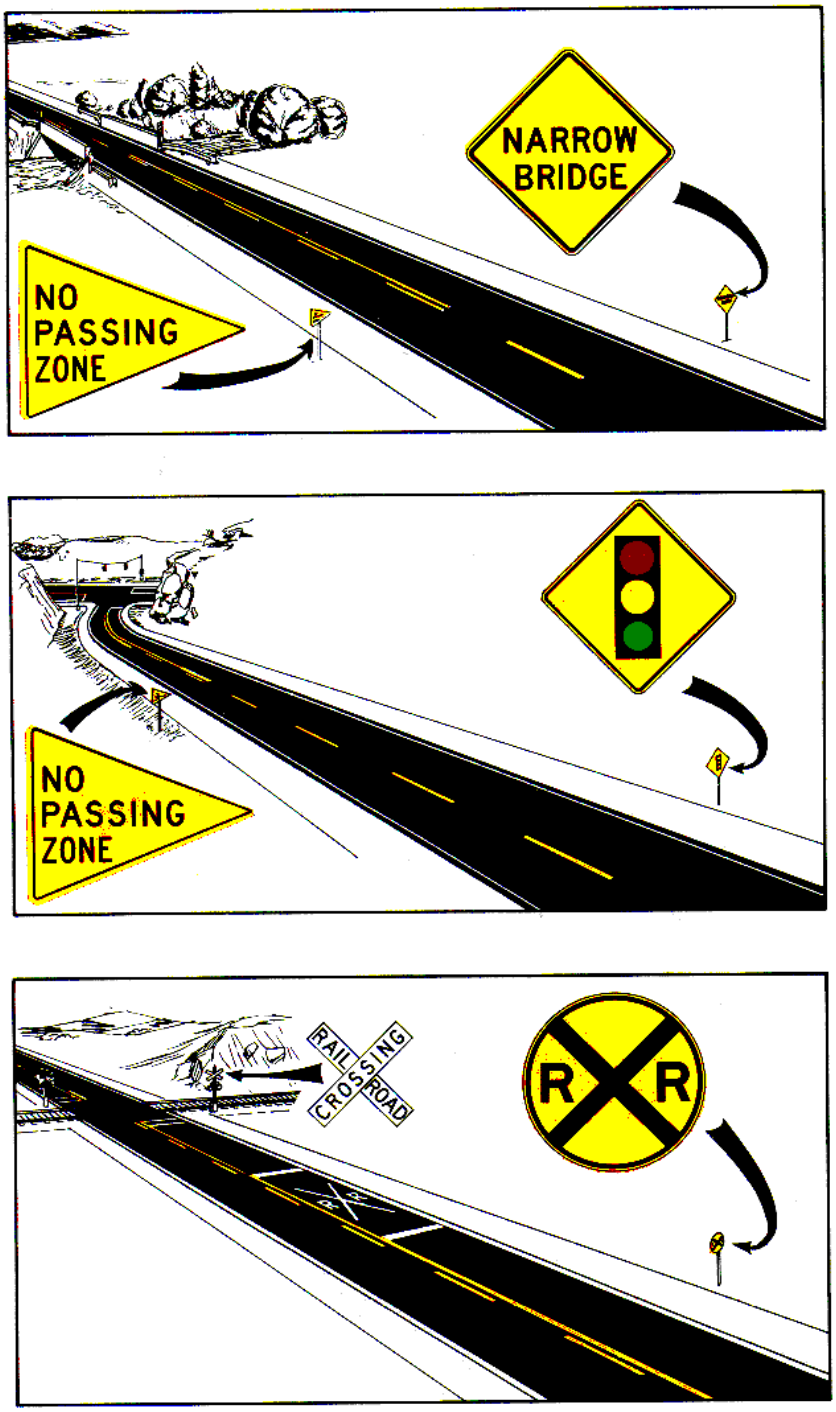
The Manual also provides for the installation of signs, for advance warning of railroad crossings, on highways that are parallel to railroads (W10-2,3,4). The purpose of these signs is to warn a motorist making a turn that a railroad crossing is ahead.

SECTION 13: SUPPLEMENTAL RAILROAD CROSSING SIGNING

Supplemental signing shall be used at railroad crossings which are adjacent to intersections, both signalized and unsignalized where reduced spacing between the crossroad and the railroad tracks may pose a serious safety concern due to vehicles either stopping on the tracks or vehicles which overhang the tracks while stopped. This supplemental signing consists of the CAUTION--___FT BETWEEN TRACKS AND HIGHWAY (W10-I100) and a DO NOT STOP ON TRACKS sign (R8-8). In conjunction with the supplemental signing, supplemental pavement marking treatment is required at crossings adjacent to signalized intersections where the intersection traffic signals are interconnected with adjacent railroad warning signals. This pavement marking consists of diagonal stripes which delineate a buffer zone adjacent to the tracks where vehicles are prohibited from stopping. Figures V-13 and V-14 show details for sign placement and the pavement markings for both the signalized and unsignalized cases.

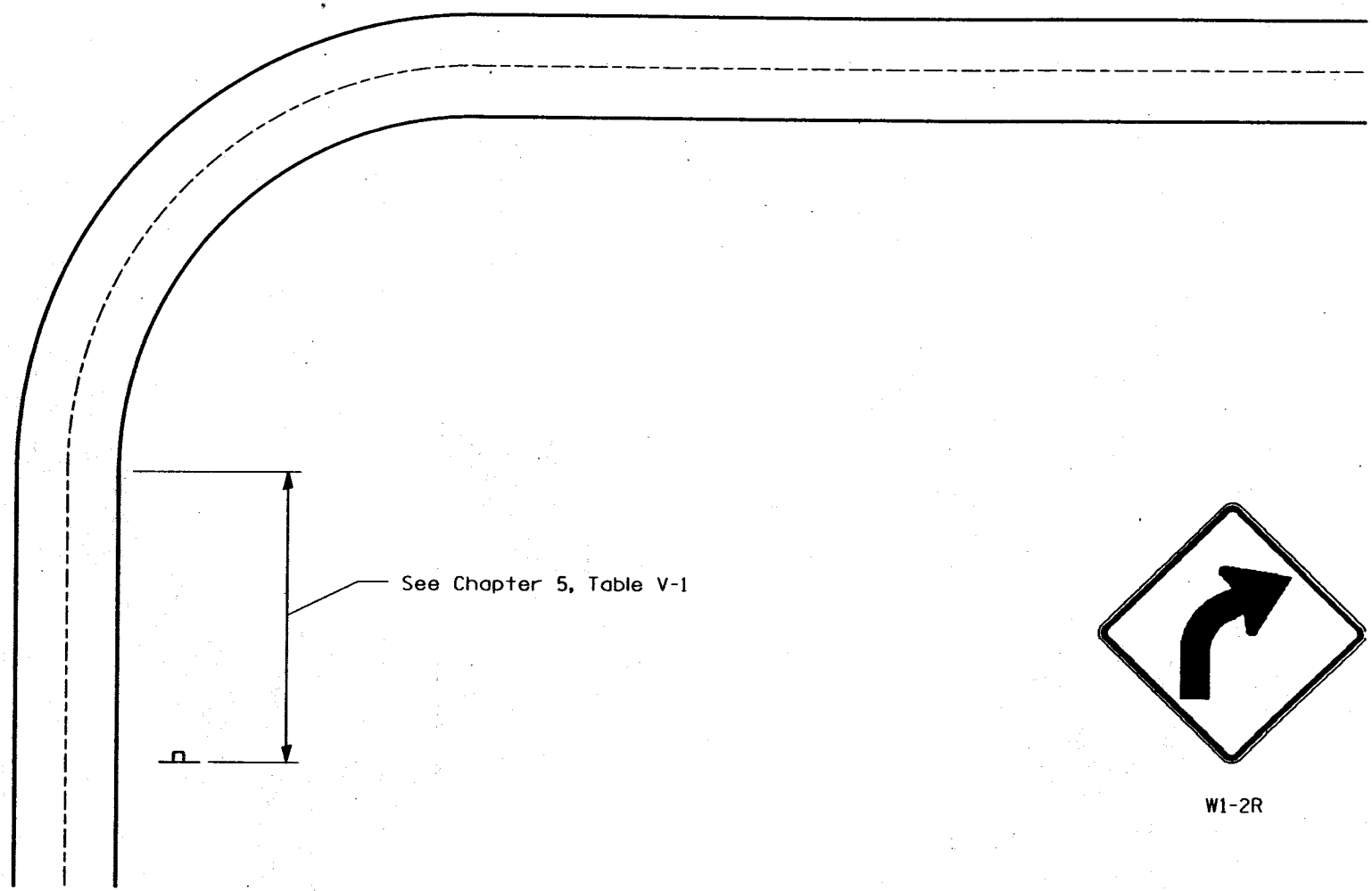
SECTION 14: OTHER WARNING SIGNS

Warning signs other than those specified above may be required under special conditions. Modifications in the design of a device may be permitted (except for the symbols) provided that the signs conform with the general specifications for shape, color, and placement of warning signs.



TYPICAL APPLICATIONS OF WARNING SIGNS

Figure V- 1

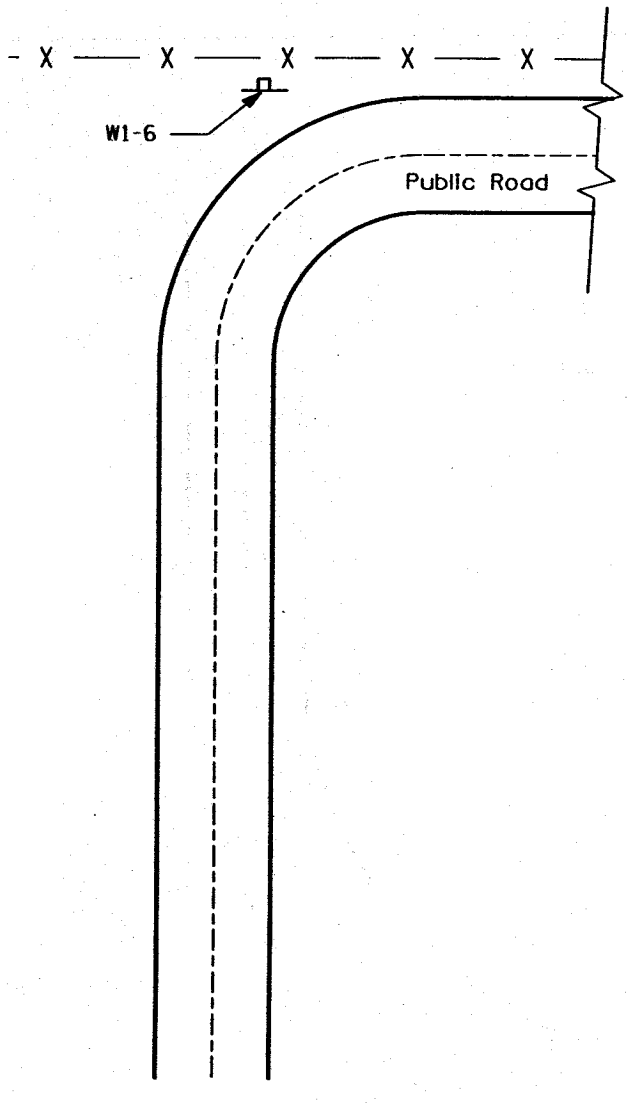


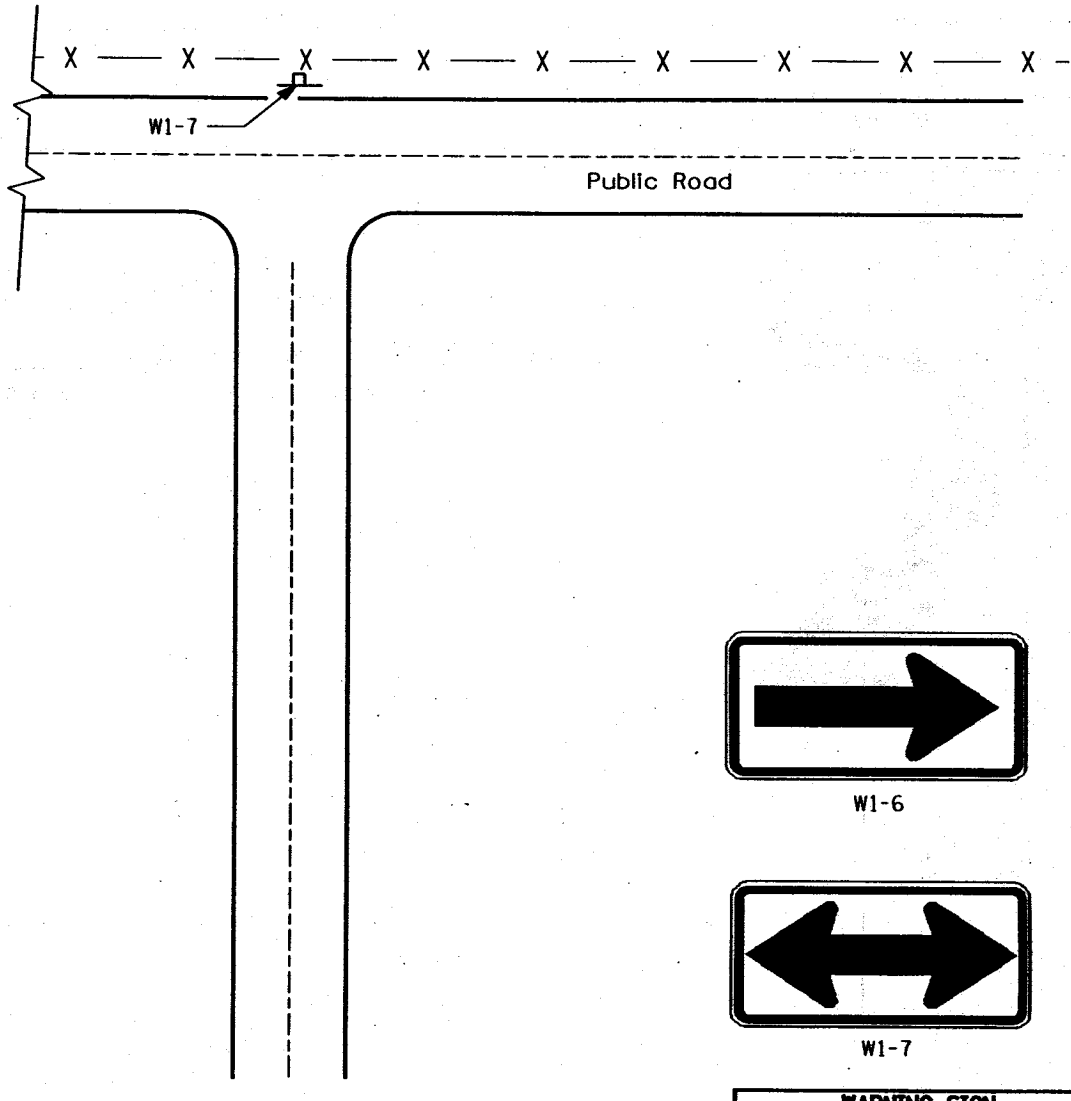
W1-2R

WARNING SIGN
CURVE
(W1-2R)
(W1-2L)

FIG. V-2

SHEET 32





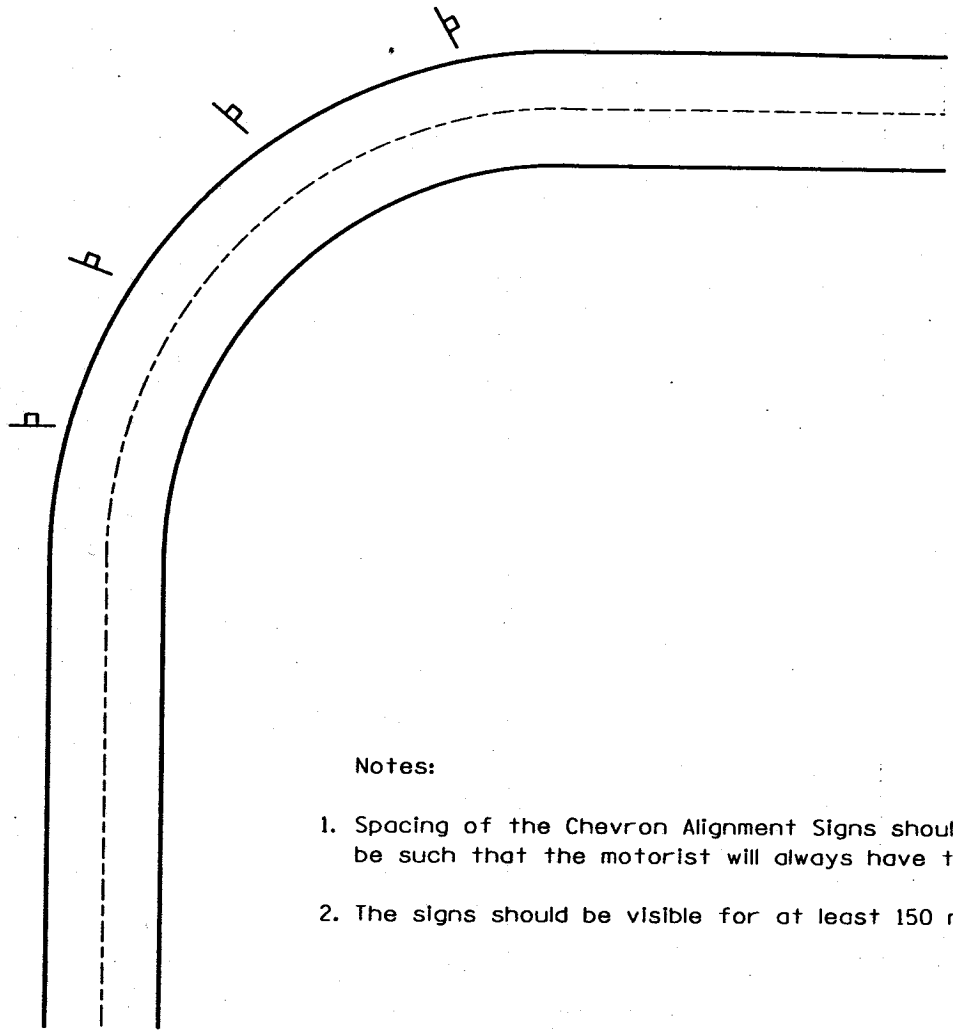
W1-6

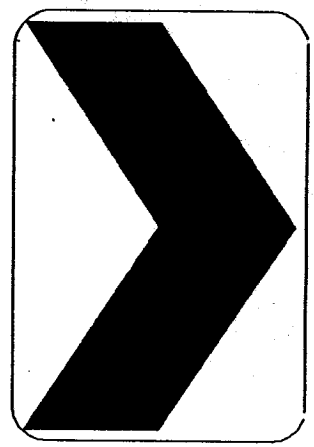
W1-7

WARNING SIGN
LARGE ARROW
SINGLE ARROW
(W1-6)
DOUBLE ARROW
(W1-7)

FIG. V-3

SHEET 33





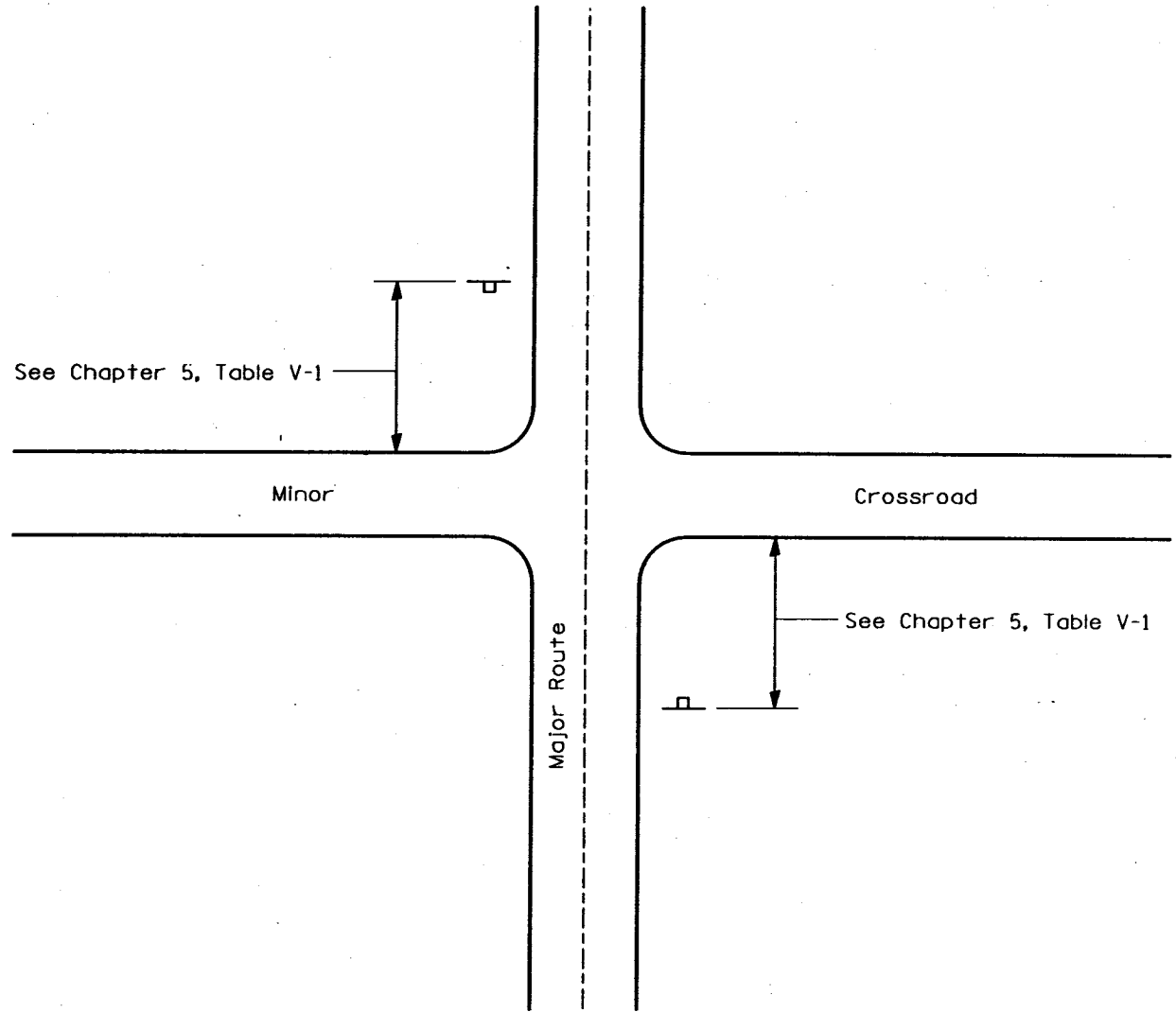
Notes:

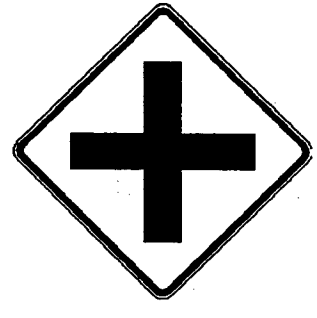
1. Spacing of the Chevron Alignment Signs should be such that the motorist will always have two in view.
2. The signs should be visible for at least 150 m (500').

WARNING SIGN
CHEVRON ALIGNMENT
(W1-8)

FIG. V-4

SHEET 34



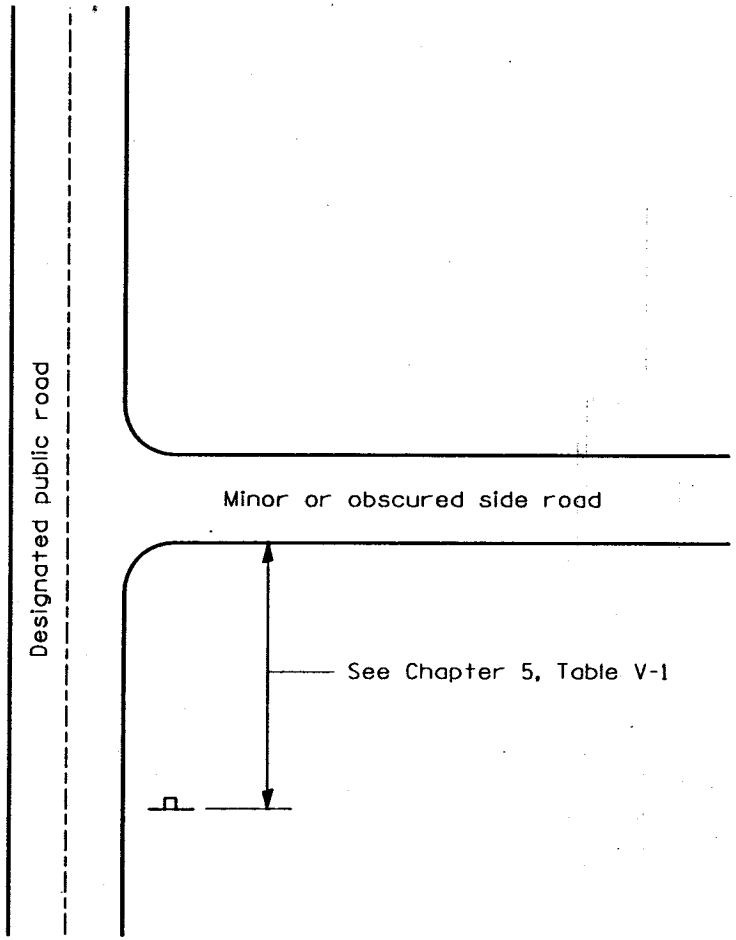


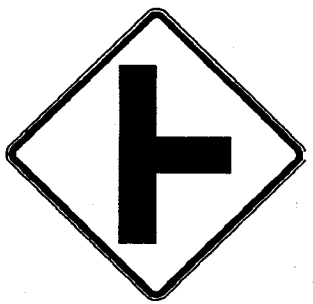
W2-1

WARNING SIGN
CROSSROAD SIGN
(W2-1)

FIG. V-5

SHEET 35

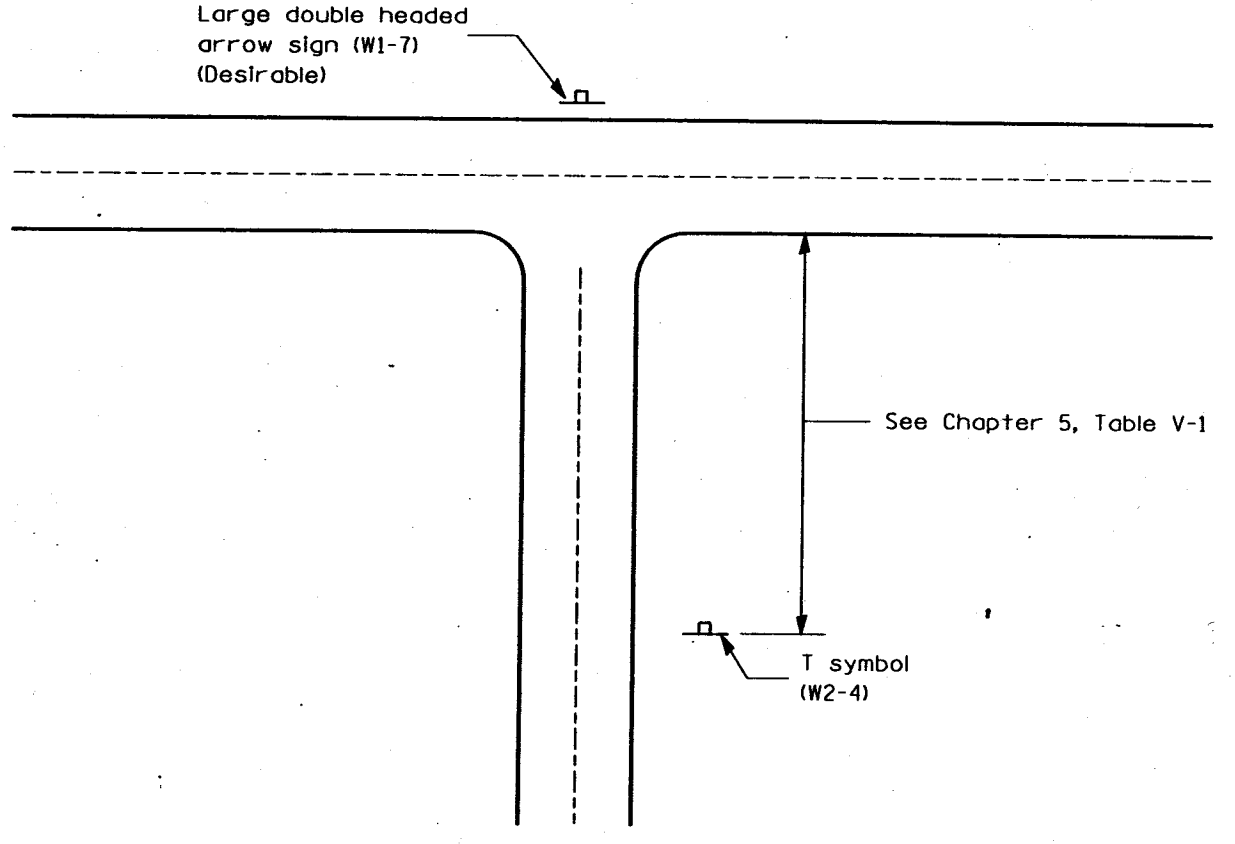


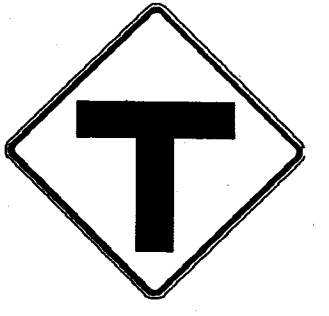


W2-2

WARNING SIGN
SIDE ROAD SIGN
(W2-2)

FIG. V-6



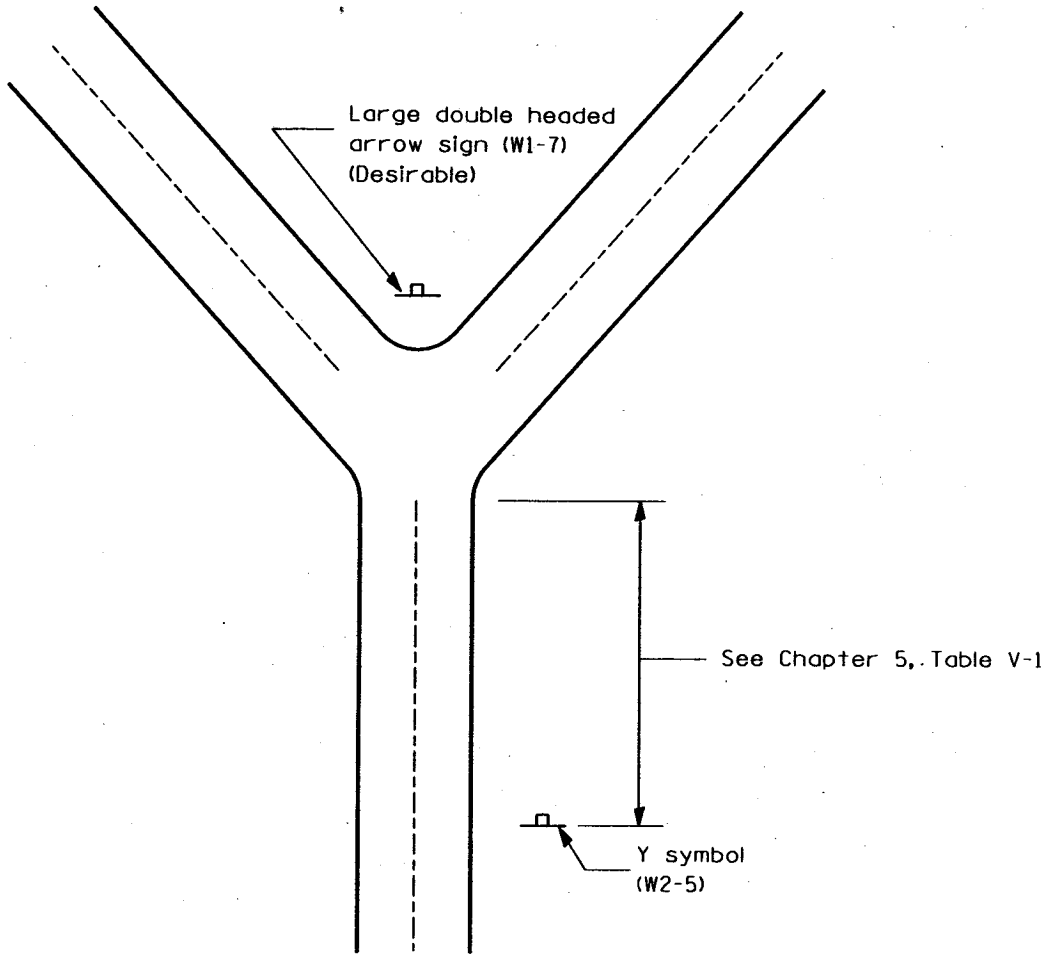


W2-4

WARNING SIGN
T SYMBOL
(W2-4)

FIG. V-7

SHEET 37

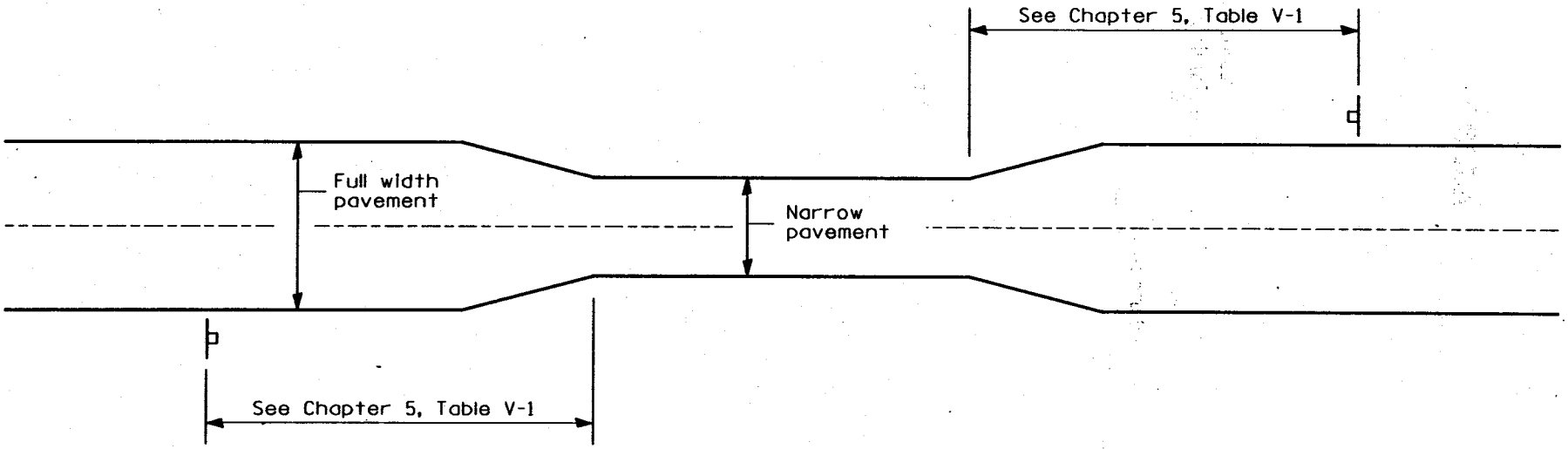


W2-5

WARNING SIGN
Y SYMBOL
(W2-5)

FIG. V-8

SHEET 38

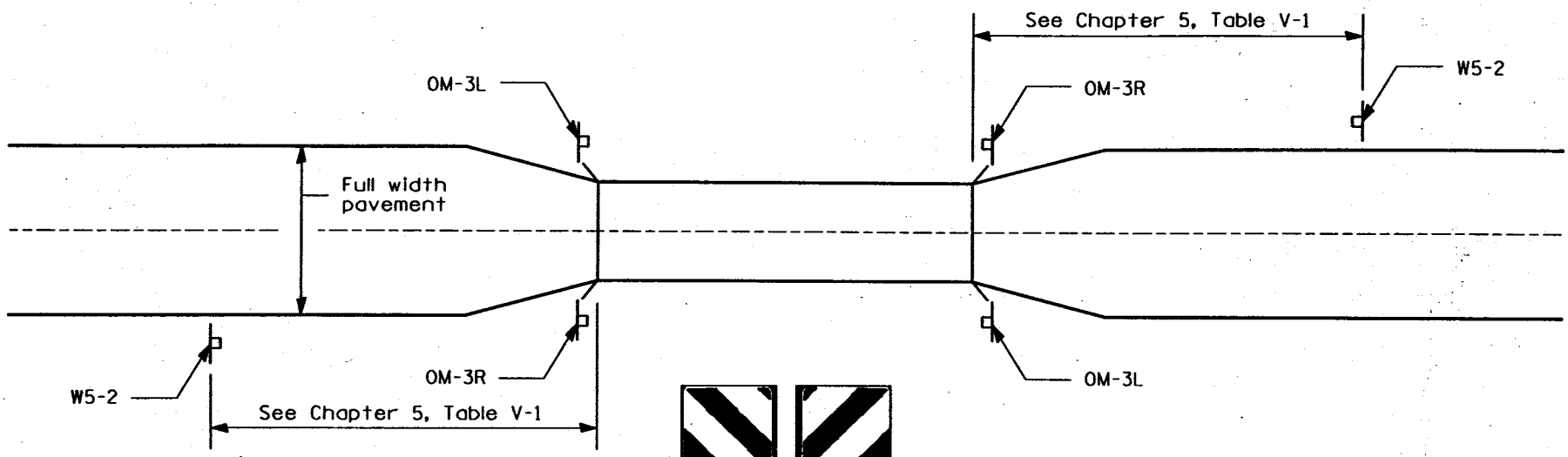


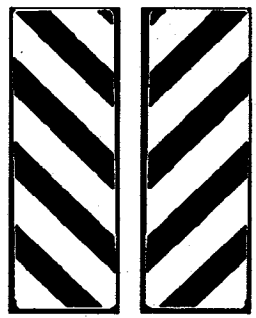
W5-1

WARNING SIGN
ROAD NARROWS
(W5-1)

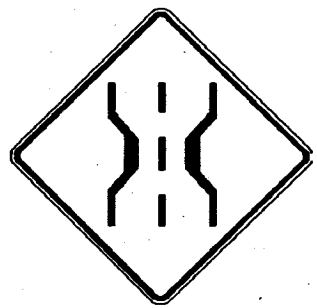
FIG. V-9

SHEET 39





OM-3L OM-3R



W5-2a

or

W5-2

Notes:
Narrow Bridge Signs shall be used when:
1) The clear roadway width on the structure is 5.0 m to 5.5 m (16' to 18').
or;
2) The clear roadway width is less than the approach roadway width.

WARNING SIGN
NARROW BRIDGE
(W5-2)
TYPE 3 OBJECT MARKER
(OM-3L), (OM-3R)

FIG. V-10

SHEET 40

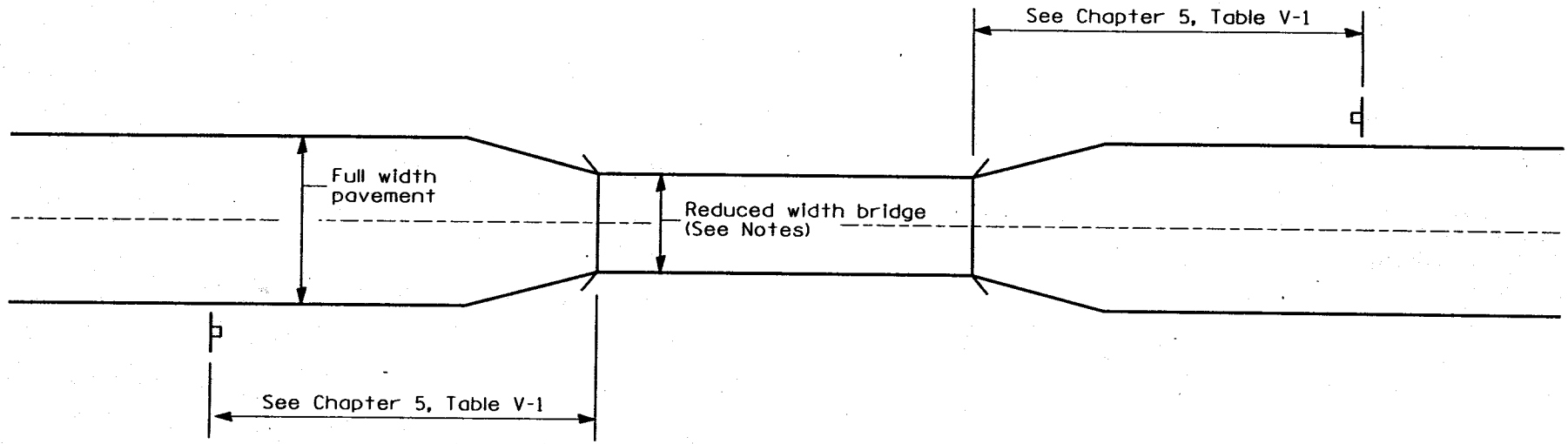


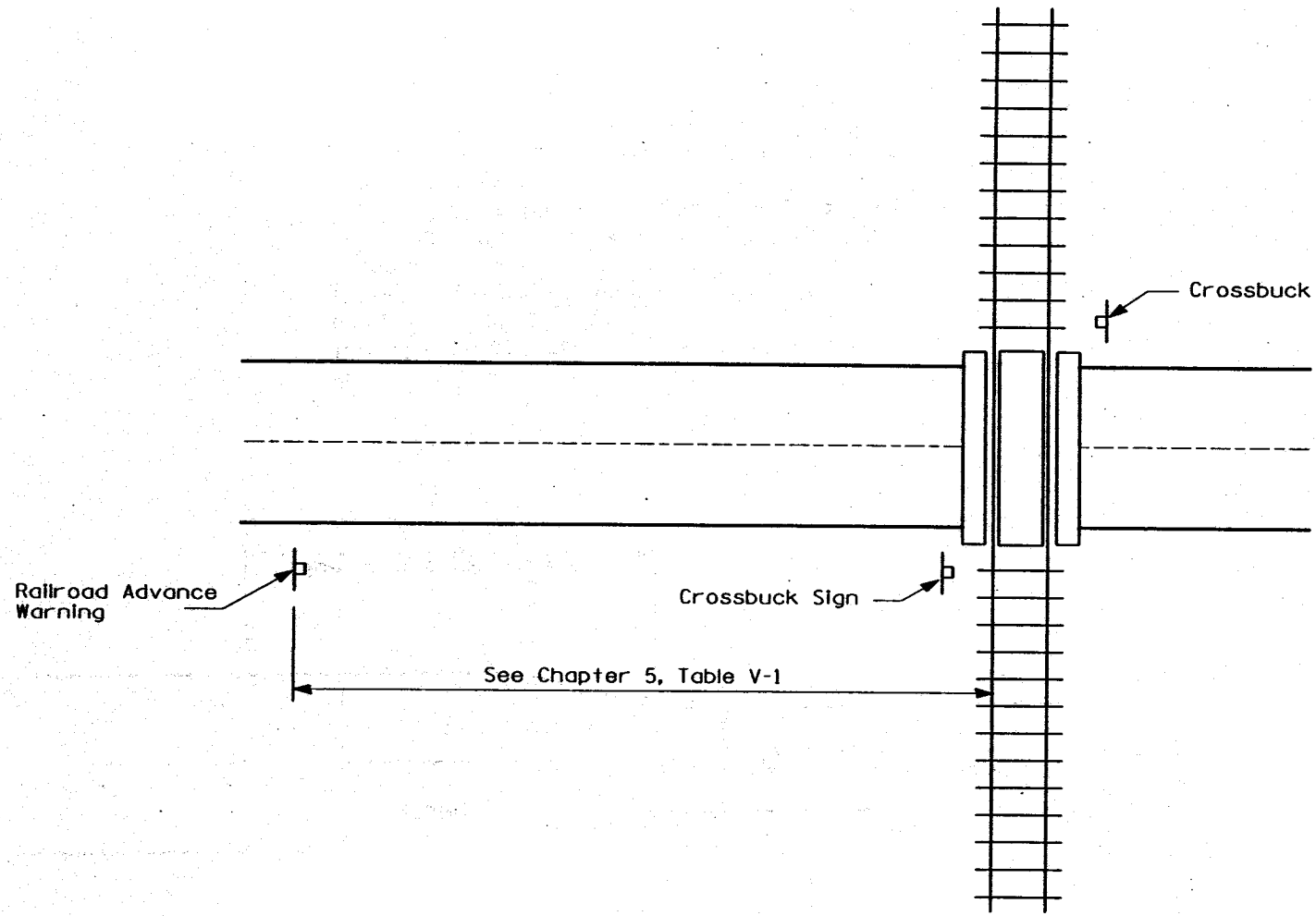
FIG. V-11

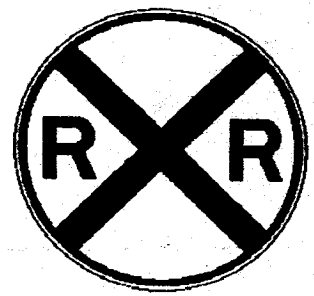
Notes:
This sign is intended for use in advance of bridges or culverts:

1) Having a clear roadway width of less than 5.0 m (16').
2) Having a clear roadway width of less than 5.5 m (18') if trucks make up a large portion of the traffic.
3) When the approach alignment is poor to a structure with a clear roadway width of 5.5 m (18') or less.

W5-3

WARNING SIGN
ONE LANE BRIDGE
(W5-3)



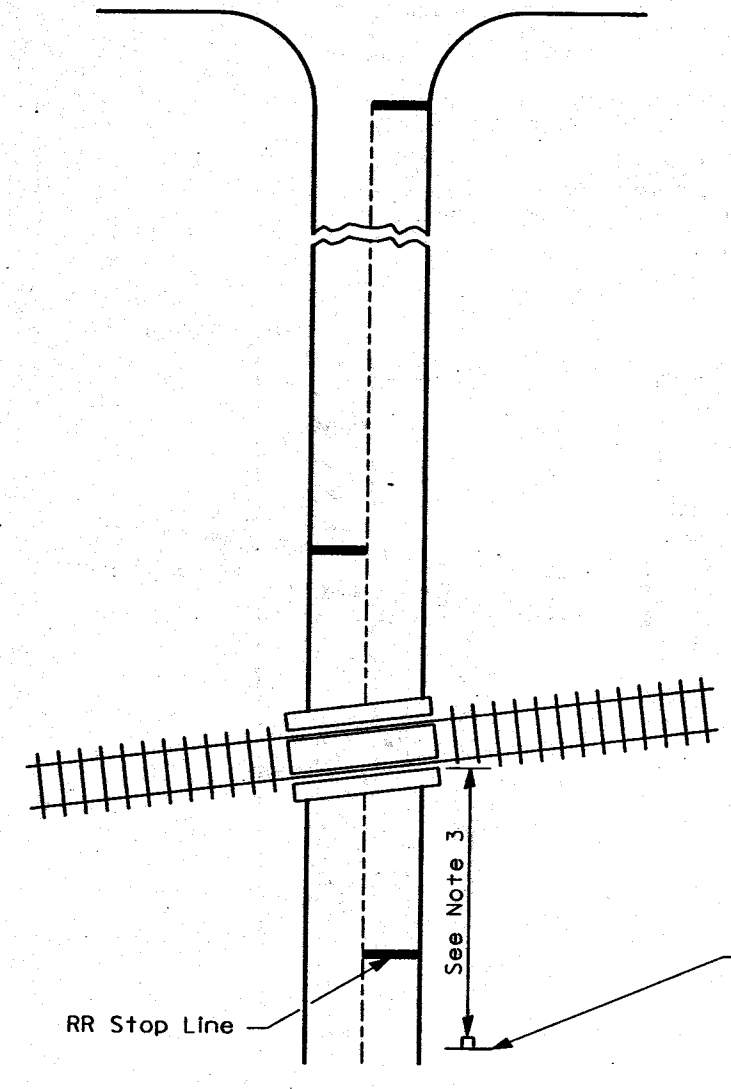


W10-1

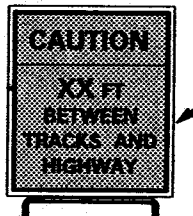
WARNING SIGN
RAILROAD ADVANCE
WARNING
(W10-1)

FIG. V-12

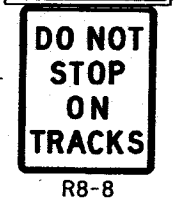
WITH NONSIGNALIZED INTERSECTION
25 m (81 ft.) or less to closest rail



W10-I100



See Notes 1 and 2



R8-8

GENERAL NOTES

1. Distance to be shown on sign measured from point 1.8 m (6 ft.) from the rail closest to the intersection to the stop bar or crosswalk, which ever is closest, rounded (down) to nearest 1.5 m (5 ft.). Where there is no stop line, measure to point where driver has a view of approaching traffic.
2. The clearance sign is also to be used as an interim measure at locations with interconnected intersection traffic signals where it is planned to change them to near-side signals at a future time. In this case, the distance to be shown on the sign is measured from the edge of the striped-out area instead of 1.8 m (6 ft.) from the rail. The sign is to be removed when the near-side signals are installed and the pavement markings extended to the intersection.
3. Where there are no pavement markings, sign is to be located 2.4 m (8 ft.) from the crossing gate (where present) or 4.5 m (15 ft.) from the tracks.

SPECIAL NOTE

Signs are to be located and placed in accordance with these details and the MUTCD. Normal precautions should be taken for underground utilities. Signs placed on railroad right-of-way or structures must first be coordinated with the railroad.

TYPICAL SUPPLEMENTAL SIGNING TREATMENT FOR RAILROAD CROSSINGS WITHOUT INTERSECTION TRAFFIC SIGNALS

FIG. V-13

SHEET 43

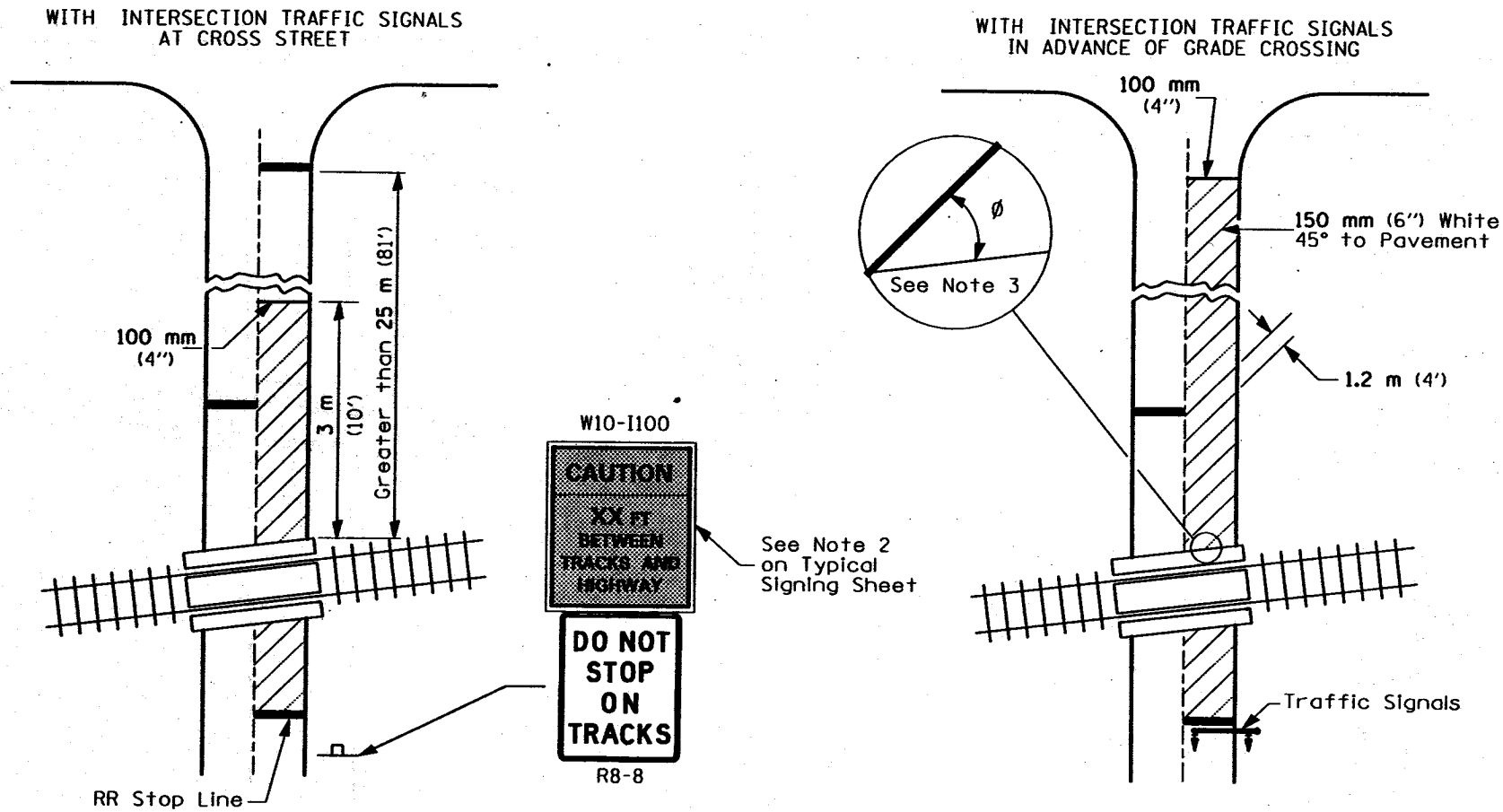


FIG. V-14

SHEET 44

GENERAL NOTES

1. Pavement markings to be installed only on paved approaches to intersections controlled by traffic signals which are interconnected with the railroad warning signals.
2. Where near-side traffic signals are used, the pavement markings extend to the intersection.
3. Where the angle between the diagonal stripes and the track (Ø) would be less than approximately 20°, the stripes should be sloped in the opposite direction from that shown.

TYPICAL SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD CROSSINGS WHERE INTERSECTION TRAFFIC SIGNALS ARE INTERCONNECTED WITH ADJACENT RAILROAD WARNING SIGNALS

CHAPTER 6 - MISCELLANEOUS

SECTION 1: GUIDE SIGNS

Guide signs are used to guide motorists along established routes. They are used to inform the motorist of intersecting routes, to direct to cities, villages, or other important destinations, to identify nearby rivers and streams, parks, forests and historical sites, and generally to give such information as will help direct the way in the most simple method possible.

The guide signs which should be used most often on township and road district roads are the destination, distance, and informational signs. These signs normally shall consist of a white message on a green background and should be reflectorized according to the requirements for individual guide signs or groups of signs in the Manual. Unlike most other types of signs, guide signs do not lose their effectiveness by frequent use. These signs should not contain so much information or be so close together that the messages will be lost by the driver.

SECTION 2: TOURIST ORIENTED DESTINATION SIGNING (TODS)

The Tourist Oriented Destination Signing (TODS) program provides for the display of tourist oriented directional signs along various State-maintained non-freeways in order to provide motorists with travel related directional information to facilities of interest to tourism. The program applies to areas within the state of Illinois which are located in rural areas with rural area being defined as "an area outside of an incorporated municipality with a population of 500 or less or any area with a population density of 500 or less inhabitants per square mile."

For a business to qualify, it shall not be located on or adjacent to a marked state highway, however it must be within 5 road miles of a marked State highway and must be located in a rural area as previously defined.

A business on a road intersecting with a marked State highway will be signed on the State marked highway if it is visible to the motorists from the intersecting road, or if a sign is on the business site advising motorists of the appropriate entrance to the establishment.

A business that is not on the road intersecting with a marked State highway will be signed on the State marked highway if trailblazing or other signs are in place on the intersecting road and on such other roads as may be necessary to clearly advise motorists where to turn to reach the business. Where the intersecting road or other roads leading from the intersection with the State marked highway are unmarked State highways, the Department will place such trailblazer signs on the state highways for the fee established with the program.

Where roads are under local agency jurisdiction, signing will not be provided on State highways until legible trailblazer or other signs are placed by, or by permission of, such local agencies with directional information advising motorists where to turn. The business shall have the responsibility for arranging for the placement of all signs on roads under local agency jurisdiction. The decision to place or allow signs on the local system will rest with the local agency. The local agencies, under a statutory provision, shall also have the authority to sell or lease space on these signs to the owners or operators of the businesses.

Tourist oriented directional signs on highways under local agency jurisdiction may be of any legible design and color provided that the name of the business is consistent with that requested for the signing on State highways and that the signs contain adequate directional information.

Examples of Tourist Oriented Destination signing and trailblazer sign placement are shown in Figures VI-1 through VI-3.

Further information on the TODS program can be obtained by contacting the IDOT Bureau of Operations, 2300 S. Dirksen Parkway, Springfield, Illinois 62764, (217)782-7231.

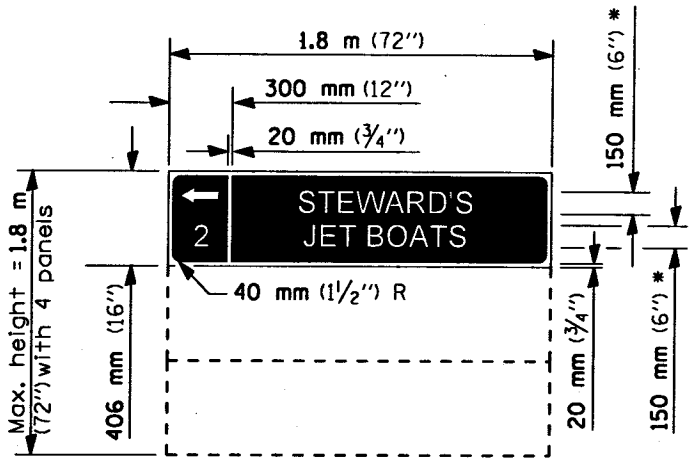
SECTION 3: OBJECT MARKERS

Object markers should be used to identify objects such as bridge handrails, abutments and culvert headwalls whenever the object is located either on or adjacent to the roadway. The inside edge of the marker should be placed in line with the inner edge of the obstruction.

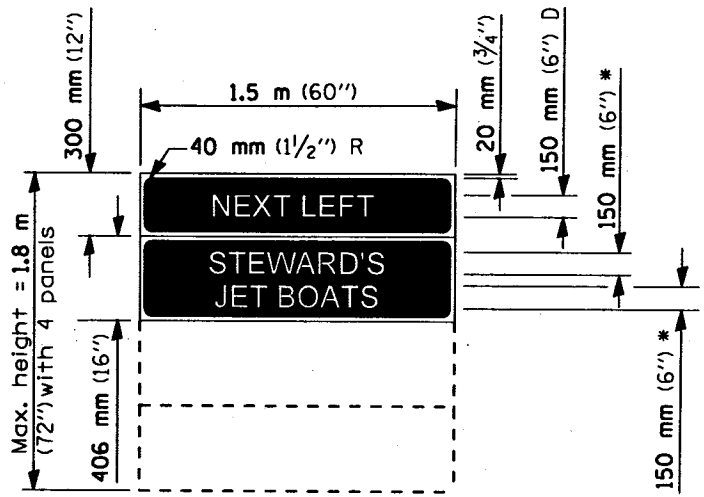
The Type 3 Object Marker (Figure V-10) will be the one most frequently used on rural township roads. It consists of a vertical rectangle 1 foot by 3 feet (300 mm x 900 mm) in size with alternating black and reflectorized yellow stripes sloping downward at an angle of 45 degrees toward the side of the obstruction on which the traffic is to pass. The minimum width of the yellow stripe shall be 3 inches (75 mm) with the black stripe slightly wider.

When used for marking objects in the roadway or within 8 feet (2.4 meters) from the shoulder, the mounting height to the bottom of the object marker should normally be 4 feet (1.2 meters) above the surface of the nearest traffic lane. When used to mark objects more than 8 feet (2.4 meters) from the shoulder, the mounting height to the bottom of the object marker may be 4 feet (1.2 meters) above the ground.

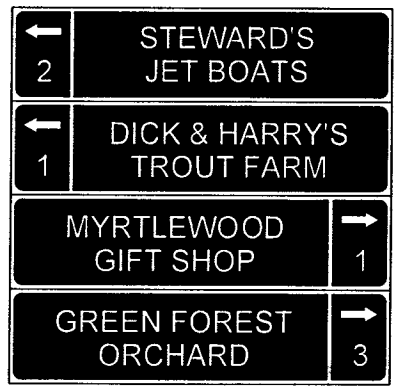
When object markers or markings are applied to a hazardous object, which by its nature requires a lower or higher mounting, the vertical mounting height may vary according to need.



INTERSECTION SIGN



ADVANCE SIGN



COMBINED SIGN

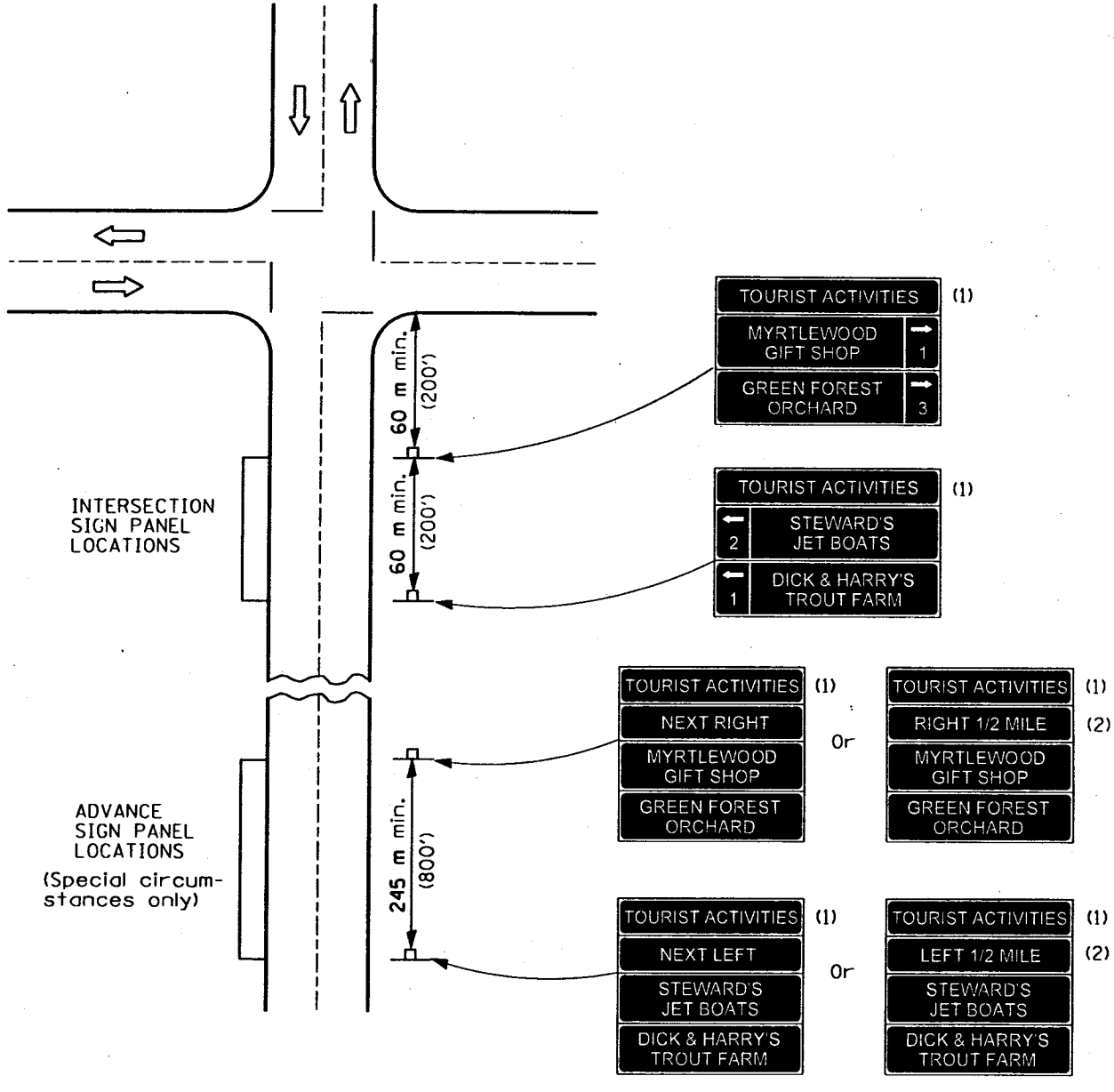
GENERAL NOTE

* Series of lettering depends upon length of legend. Maximum length of business name per line is 1.63 m (5'-4"). Reflectorized white legend on reflectorized blue background.

TYPICAL TOURIST ORIENTED DIRECTIONAL SIGNS

FIG. VI-1

SHEET 47



NOTE:

(1) Optional message

(2) Use if there is an intervening road.

TYPICAL SIGNING FOR TOURIST ORIENTED SERVICES

FIG. VI-2

SHEET 48

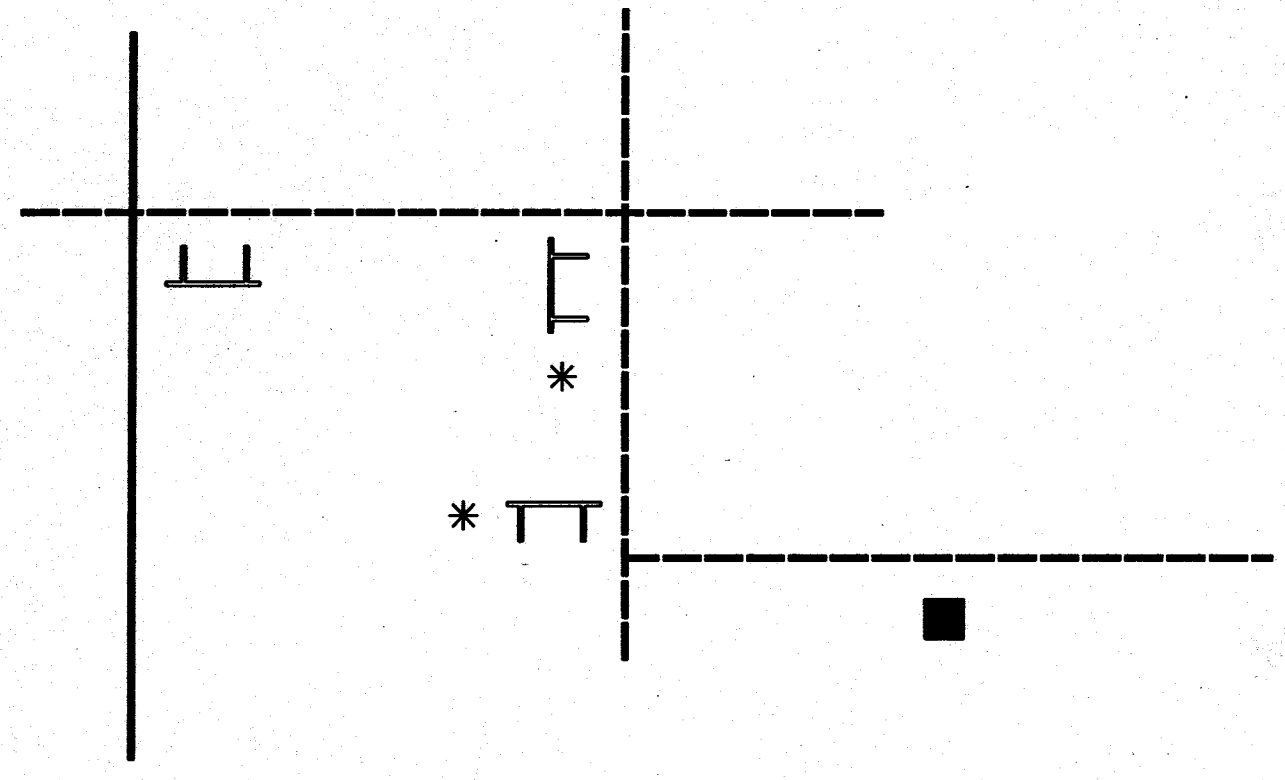


FIG. VI-3

LEGEND

- Marked State non-freeway
- Unmarked State or local non-freeway
- * Trailblazer responsibility of agency having jurisdiction over road
- Tourist panel with business sign at intersection with marked State highway
- Business

GENERAL NOTES

1. Road miles to business will be measured from intersection of marked State highway to center of business entrance.
2. Tourist panels will not be installed until trailblazers or other signing is in place as necessary to direct motorists from marked State highway to business.

EXAMPLE OF TRAILBLAZER SIGN PLACEMENT